

FRUITS OF PHILOSOPHY,
OR THE
PRIVATE COMPANION
OF
ADULT PEOPLE.
BY
CHARLES KNOWLTON, M. D.

“Knowledge is Wealth.”

FOURTH EDITION, WITH ADDITIONS.
Price, One Dollar.

PHILADELPHIA.
F. P. ROGERS, PRINTER.

1839.

Eastern District of Pennsylvania, to wit.

BE IT REMEMBERED, that on the
Ninth day of September, Anno Domini
One Thousand Eight Hundred and
Thirty Nine, Charles Knowlton, M. D., of the said
District, hath deposited in this office the Title of
a Book, the Title of which is in the words follow-
ing, to wit:

*Fruits of Philosophy, or the Private Companion of
Adult People. By Charles Knowlton, M. D.
"Knowledge is Wealth." Fourth Edition, with
additions.*

The right whereof he claims as author, in con-
formity with an Act of Congress, entitled "An
Act to amend the several Acts respecting Copy
Rights."

FRA. HORKINSON,
Clerk of the District.

Extract from the Copyright Law.

"**Sec. 7.** *And be it further enacted, That, if any per-
son or persons, after the recording the title of any print-
cut or engraving, map, chart, or musical composition,
according to the provisions of this act, shall, within the
term or terms limited by this act, engrave, etch, or work,
sell, or copy, or cause to be engraved &c., either in the
whole, or by varying, adding to, or diminishing the main
design, with intent to evade the law; or shall print or
import for sale, or cause to be printed or imported for
sale, any such map, chart, &c., or any parts thereof, with-
out the consent of the proprietor, &c., or, knowing the
same to be so printed or imported, shall publish, sell, or
expose to sale, &c.; then such offender or offenders shall*

NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

Gift of
James Harvey Young

In memory of his parents

William Harvey and Blanche DeBra
Young



INTRODUCTION

IT is now eight years 'since *theory* led me to adopt and to recommend to others, a simple, cheap, and harmless method of preventing conception, without requiring any diminution or sacrifice of that enjoyment which attends the gratification of the re-productive instinct. During this eight years I have permitted this work to pass through three editions, comprising in all only seven thousand copies. I have thus limited the circulation of the work with a view of becoming entirely sure, from my own immediate observation and experience, that my method is infallible, before I gave the work free circulation. I can now say, that I have not a shadow of doubt, but that the method of preventing conception, under free and entire intercourse, to which I allude, will invariably prove effectual; the directions herein after given being duly followed.

To convey a knowledge of this method, or of what may be called the *anti-conception art*, in such a manner as shall command the confidence of all

who may wish to adopt it, is the *leading* object of this work.

I am aware that with ~~other~~ minds the first impression will be, that this object is *not good*. But I am also fully satisfied, from what has already fell under my observation, that the more such minds reflect upon the subject the more favourable opinion will they have of it. At any rate, it is a subject of too great and abiding influence to be passed over without a serious and impartial examination. I am perfectly willing that the anti-conception art stand or fall according to its merits. But I do desire that these merits be inquired into before sentence is passed—I do desire that the reader will try to divest himself of all prejudice—if sensible he has any—and go along with me into an examination of its merits and demerits.

As this work will of course be restricted to private perusal, I think it will be well to make it a medium of considerable information concerning the genital systems, their diseases, &c., which all people desire to obtain, and ought to possess, but which can be derived only from some medical source. And I give such information the more readily, because the people have been grossly imposed upon by unprincipled persons who have attempted to write popular physiological treatises on generation, &c., when they were totally unqualified for the task, and have consequently presented the reader with a jumble of truth and error, of science

and obscenity, which, while it may have been satisfactory to those unqualified to judge of the truth of what they read, must have been productive of quite as much mischief as benefit. I now allude to a work ascribed to Aristotle, and to all similar works that have been circulated more or less privately among the people.

And especially do I allude to "Canfield's Lectures on Sexual Physiology," and to another work entitled "Marriage Physiologically Discussed," probably from the same pen, recently published and falsely purporting to be translated from the French. Neither of these works were written by a person of sound head or pure heart. They are both violations of my copyright. But in the author's attempt to convey my ideas in his own language, and to vary my directions under the false notion that he would thus evade the law of copyright, or escape the charge of plagiarism, he has committed the grossest errors, and discovered an entire ignorance of the subjects of which he treats. And, what is peculiarly provoking, this arch fabricator of dirty stories has the impudence to set forth, that he has devoted many years to the subject of "Sexual physiology," &c., and claims to be original, when it is perfectly clear that every useful, and almost every decent idea, which his books contain, were gathered from works which had been circulated from one to three years before, and in the city where his were published.

Whoever places any confidence in either of the above mentioned works, may find himself deceived, when it may be difficult to remedy the mischief growing out of such deception. There is scarcely a page in the latter part of "Marriage Discussed," but what contains positive error, or discovers great ignorance in the writer.

Ashfield, Franklin Co., Mass., Sept. 4, 1839.

CHAPTER I.

THE ARGUMENT.

IN deciding whether any thing be good or evil, we must, (ever keeping human nature in view,) consider whether it will be productive of more or less misery than happiness. If more of the former than of the latter, it is evil, bad, wrong &c., but if more of happiness than misery, it is good, right, &c.

Upon this principle let us now proceed to weigh in the scale of reason, the evil that is likely to arise from a knowledge of the anticonception art, against the good that may be derived from the same knowledge.

And first, of the evil. Perhaps no person has had a better opportunity than myself to hear the objections that can be brought against this art. Yet I have heard of but two. One, that it will lead to illegal intercourse, second, that it is "against nature."

In relation to the first I contend, that in almost all cases in which the chastity of a female can be overcome, with the knowledge which this

book conveys, it could and would be overcome without such knowledge. However erroneous the opinion, the workings of common sense have led and do lead almost all to believe, that there is a way in which nearly a complete intercourse may be enjoyed without *any* risk of conception. And where fear of conception is the only barrier (and surely it is only by removing this fear that it can be said this work will lead to illegal intercourse) the seducer, to obtain his object, has nothing more to do than to satisfy the female that he will practice this "way." And when the reader has been made acquainted with the means which I propose for preventing conception, I think he will admit, that when a male and female have become so familiar as to propose to use these means, they would practice the "way" or draw-back, to which I have alluded, if no such book as this had ever been written. This being the fact, I do not see that a knowledge of the *check* which I propose can have any other effect than that of enabling the parties to enjoy a more complete, agreeable, but not a more hurtful intercourse, than they otherwise would, and this too, without any risk of conception, whereas the draw-back, as usually practiced is not (probably) quite sure, as I shall hereafter show. I wish the reader to ponder over these remarks, for if they be correct, then is the greatest objection which can be raised against this book reduced to something less than nothing.

"The second objection is, that it is "against nature." Well, what if it is? In this restricted sense of the word, it is also against nature to cut our nails, our hair, or to shave the beard. What is civilized life but one continual warfare against nature? The high prerogative of man consists in his power to counteract and to control nature. Art, as opposed to nature—though in one sense, art and every thing else is natural—is what raises man from a state of nature, that is, from a savage to a civilized state. Many diseases, as well as the infirmities of old age, are the natural effects of natural causes; and the natural course of many diseases is to a fatal termination, yet we often successfully resort to art for the cure of them, and no one thinks it wrong to do so. To direct the electric fluid from its natural course by lightning rods is to oppose nature. Those who raise this objection ought to consider that if it be wrong in the abstract to oppose nature in one case, it is in all, and consequently we ought to obey the voice of nature, and gratify all our natural desires. Men and women, instead of mortifying the flesh, ought to cohabit as frequently as their natural inclinations prompt them to do so. Much more might be said, tending to show the futility of this objection, but in fact, it is not worthy of the notice I have already taken of it. Undoubtedly the time has been, when the greatest good of the greatest number required that man should "multiply and

replenish the earth," but the same object now requires that he should have power to control the number of his offspring without sacrifice of enjoyment.

I now proceed to suggest to the reader the several *advantages* of this art; and this I shall do, mainly, by shewing the evils that may be mitigated or avoided by it.

First. As a means of preventing over population. That "population, unrestrained, will advance beyond the means of support," is a fact which no one will deny. It has been ascertained that where the natural increase of the human species is not restrained by want, war, vice, or some other means —*besides* those totally beyond the power of man to avoid—population will double on the average, once in about thirty three and a third years, that is, three times in a century. Accordingly if we compute the present population of the world at 1,000 millions, there would be at the end of 100 years from the present time, 8,000 millions; at the end of 200 years, 64,000 millions; at the end of 300 years, 512,000 millions; and so on multiplying by eight for every additional hundred years. If this natural increase should go on without check of some kind, for 1,500 years, one single pair would increase to thirty five thousand one hundred and eighty four times the population of the whole earth.

Some kind of check, then, there certainly must

be ; and if there be no other, the time must come when it would be starvation or cannibalism. Hence some have maintained, with apparent plausibility, that vice, war, misery, &c., are the express ordinances of Providence, intended to prevent the greater evil of over population ; and that it would be useless, if not impious, to attempt to remedy or prevent them. Malthus, an English divine, duly impressed with the fact that there must be some check, and not wishing to advocate war, intemperance, crimes, unjust laws that oppress the labouring classes, and such like evils—which have heretofore been the common checks to the natural increase of population—proposed what he misnamed “moral restraint,” that is celibacy to a late age, say thirty years. This, on the whole, the reverend gentleman regarded as the best means of preventing over population, with its many attendant evils, within his knowledge. But is this the sad condition of the human family? is there no better check than this of Malthus, which is useless, if not worse? Useless, because though Malthus and his many followers (in theory) may preach forever on the subject, the mass of mankind will not follow his injunction.

But if this injunction were to be generally followed, only look at the probable consequences. “The most enlightened observers of mankind are agreed that nothing contributes so positively and immediately to de-moralize a nation as for its

youth to refrain until a late age, from forming disinterested connexions with those of the other sex. The frightful increase of prostitution, the destruction of health, the rapid spread of intemperance, the ruin of moral feelings are to the mass, the *certain* consequences."

Only let the physiological check proposed in this work become generally known, and all the evils of over population, as well as those of Malthus' proposed remedy for the same, may, and probably would be avoided. Every person would then have it in his or her power to take care of one, and if this were done, then every one would be taken care of. No man would need have more children than he could see a fair prospect of properly educating and providing for; and as no one would need look ahead farther than one generation, or for his own offspring, no one would be likely to err greatly in his calculations.

It is unquestionably to some artificial check to conception that Mill, the talented author of "British India" alludes in the following extract (taken by Owen) from the article "Colony," in the supplement to the *Encyclopædia Britannica*.

"What are the best means of checking the progress of population, when it cannot go on unrestrained without producing one or other of two most undesirable effects, either drawing an undue portion of the population to the mere raising of food, or producing poverty and wretchedness, it is

not now the time to enquire. It is, indeed, the most important practical problem to which the wisdom of the politician and the moralist can be applied. It has, till this time, been miserably evaded by all those who have meddled with the subject, as well as by those who were called upon by their situation to find a remedy for the evils to which it relates. And yet, *if the superstitions of the nursery were disregarded, and the principle of utility kept steadily in view*, a solution might not be very difficult to be found ; and the means of drying up one of the most copious sources of human evil—a source which, if all other sources were taken away, might alone suffice to retain the great mass of human beings in misery, might be seen to be neither doubtful nor difficult to be applied."

A nation is composed of individuals, and to be a happy nation the individuals must be happy. At the present time, the situation of many individuals in the United States would be much better if they were not borne down, as they are, by a numerous offspring ; yet I do not think there is now an excess of population in these States—I do not think that the greatest good of the greatest number requires that the population of these States, taken as a whole, should be less. But this cannot be said of every nation—especially China, in some of the large cities of which, it is said that men, appointed for the purpose, pass through the streets every morning with carts to pick up the infants which

the inhabitants are permitted to throw out, dead or alive; a practice which is not tolerated because the Chinese are inhuman beings, but because of the excess of population. It is some consolation to know that the evils which have heretofore been the common checks to population may be removed, and yet an excess of population may be prevented, short of the ascetic im-“moral restraint” proposed by Malthus: and thus forever save us from the horrid practice of the Chinese. If physiological checks were generally known, and generally believed to be as harmless and as effectual as some, from actual experience, have reason to believe them to be, I do not think the effect, at present, in the United States, would be to check the *general increase* of population. I think that this knowledge, while it would prevent so many overgrown and consequently poor families among us, would at the same time, promote early marriages; and nearly all, after being married a few years, would be able to support, and would desire to have a few children. Hence, for one or more centuries, the general increase would be about the same as at present.

The *second* evil to be mitigated by the anticonception art, is prostitution. The unreflecting may smile at this idea; but I would ask why it is, that there is so much prostitution in this land. Is it not because there are so many unmarried men and women—men of dissipation and profligacy, owing

to their not having married in their younger days, and settled down in life? But why are there so many unmarried men (and consequently women) in the country? Not because young hearts, when they become of age, do not desire to marry, if they could do so and yet get along as well; but because prudential considerations interfere. The young man thinks, I cannot marry yet, I cannot support a family. I must make money first, and think of matrimony afterwards. And so it is, that through fear of being encumbered with children before they have made some headway in the world, and of being thereby compelled to "tug at the oar of incessant labour" throughout their lives, thousands of young men do not marry, but go abroad into the world, and form vicious acquaintances and practices; or, having passed many years in mortification, a habit is formed, the fire of youth has abated, aititiveness has become dormant, avarice, or some other selfish passion has got possession of the man, and he does not wish to marry.

Prostitution is an evil which, in my opinion, will never be diminished permanently, and to any great degree, by any mode of operation that has ever yet been pursued for the purpose. Nature will have its course through some channel or other, and to dam the stream or to smother the flame is to furnish no lasting security against floods and fire. Mankind must undergo some essential change, not to be expected, before any regulations

which war against nature's strongest impulses will avail much. All past experience shows that both law and gospel, when opposed to man's natural instincts are as ineffectual as attempts to tame partridges; and it is strange that we have been so slow to profit by this experience. Marriage, early and general, is the grand remedy for prostitution. It would operate in more ways than one. More males than females are born into the world, and if nearly all our young men should marry, there would necessarily be but very few females left, to lead dissolute lives, if there should be a demand for them.

If our virtuous females would diminish the evil of which we are speaking then instead of giving their money to build up an "Asylum" for the abandoned females of our cities, (and to remove these would only make room for fresh hands—thus running many more through the mill,) let them encourage early marriages. This they can do in various ways. In the first place, there being means which give control over the number of offsprings, let them not contemn these means, but approve of them; and when they become common or *fashionable*, the practice of them will not be thought indelicate, any more than it now is to marry, or to have a male accoucheur. In the next place let every daughter, rich or poor, be taught to manage house-hold affairs, and to *work*. Discountenance expensive fashions and customs,

among the young and newly married, such as having a female servant, "making parties," &c. The rich set a pattern, the poorer try to follow it, and no wonder our young men in moderate circumstances are afraid to marry when they consider the expenses which attend "keeping house," under existing fashions. But if offspring be avoided, and the young wife would be prudent, and would do the necessary housework for herself and husband, he could then accumulate property quite as fast with, as without her. A book might be written on the subject now before me, but I leave it to the reflections of the reader.

Third. Poverty, ignorance, and crime may indirectly, and to a considerable degree, be prevented by the practice of the anticonception art. No one will deny that in a large proportion of the families, even in the United States, the number of children is beyond the means of their parents for comfortable support. With incessant toil and rigid economy they may, to be sure, all be kept alive, without becoming a public charge; but they cannot be properly educated and provided for. They come upon the stage ignorant and poor. If they be ambitious, they not unfrequently try some honest or dishonest scheme for getting money that involves them in great difficulties. If they be ambitious, they regularly commit... It is very true that crimes are by no means confined to the children of the poor man; the rich man's son,

having acquired profligate, instead of industrious and economical habits, becomes poor, and commits crimes; but it is equally true, generally speaking, that poverty and ignorance tend to crime; and that an excess of offspring is very frequently the cause of poverty and ignorance.

A writer in the *Edinburgh New Philosophical Journal*, for April 1834, having shown that in Europe the average age of man has been much increased, within the last century, by the progress of civilization, makes the following remarks:—

“ The life of man is thus not only embellished in its course by the advancement of civilization, but is even extended by it, and rendered less doubtful. The effects of the amelioration of the social condition are, *to restrain and diminish, in proportion to the population, the annual number of births*, and in a still greater degree that of deaths; on the contrary, a great number of births equalled or even exceeded by that of deaths, is a characteristic sign of a state of barbarism.”

Much more might be said, showing the evils of a large family of children to a man in low, or even moderate circumstances; but it avails but little to talk to those who are incapable of reflection, and to those who are capable, enough has already been said to set them a thinking. But before I pass to other subjects, I must present the following eloquent extract from *Moral Physiology*, a work which I wish every body would read.

" In how many instances does the hard-working father, and more especially the mother, of a poor family, remain slaves throughout their lives, tugging at the oar of incessant labour, toiling to live and living but to die ; when, if their offspring had been limited to two or three only, they might have enjoyed comfort, and comparative affluence ! How often is the health of the mother, giving birth every year to an infant—happy, if it be not twins !—and compelled to toil on, even at those times when nature imperiously calls for some relief from daily drudgery—how often is the mother's comfort, health, nay *her life*, thus sacrificed ! Or, if care and toil have weighed down the spirit, and at last broken the health of the father, how often is the widow left, unable, with the most virtuous intentions, to save her fatherless offspring from becoming degraded objects of charity, or profligate votaries of vice !

" Fathers and mothers ! not you who have your nursery and your nursery maids, and who leave your children at home, to frequent the crowded rout, or to glitter in the hot ball-room ; but you by the labour of whose hands your children are to live, and who, as you count their rising numbers, sigh to think how soon sickness or misfortune may lessen those wages which are now but just sufficient to afford them bread—fathers and mothers in humble life ! to you my argument comes home, with the force of reality. Others

may impugn—may ridicule it. By bitter experience you know and feel its truth."

A fourth advantage is, the prevention of hereditary diseases. It would require more space than I can spare, to convince any but enlightened physicians of the vast benefit that might be derived to the human family in this respect, by checks so simple, sure, and harmless, that to be in general use, they need only be generally known. But such physicians know full well that hereditary taints, predispositions and infirmities give rise to a large proportion of their professional business, especially among chronic diseases. Scrofula, in all its various forms, one of which is genuine consumption, sweeping off its fifty-five thousand annually in England, and its tens of thousands in these United States, is a hereditary disease. Most diseases of the nervous system, as Insanity, Epilepsy, Apoplexy and Palsey, are more or less hereditary; so, also, are Cancer, causing, it is said, one seventh of the deaths in Paris; Gout, probably Rheumatism, urinary complaints, and many other diseases that might be mentioned. Many cases of disease not regarded as hereditary, are yet rendered difficult to cure by some hereditary taint or infirmity; and many diseases are of a hereditary origin, although the parents of their victims had never been visited with diseases of the same name as these diseases of their children. Thus, a son or a daughter may be insane, owing to hereditary

predisposition, yet neither of their parents were insane, but epileptic, perhaps, or only very nervous. Persons knowing themselves to be predisposed to any of these diseases, or knowing these diseases to be in their families, may do much to prevent their propagation and diffusion in society, by restraining from offspring—an act which they would not be likely to do, if they could not do it without the sacrifice of domestic enjoyment. Many a healthy young man of blood uncontaminated there may be, who desires to marry—and who would marry—a certain female, but that he fears she would give birth to weakly children, or that her health is not equal to the risks and hardships of rearing a family; but let this young man and woman know that they need have no children unless they choose to do so, they will then marry, and thus the happiness of *both* be promoted.

Closely connected with this our *fourth* advantage of the anticonception art, is the *preservation and improvement of the species*. Spurzheim, known to the reading world as a person who devoted his life to the study of man, says, "I think that as soon as young persons understand the difference and the distinction of the sexual functions, they should be taught the laws of propagation, and not be kept in a state of ignorance that may provoke a fatal curiosity, compromising in the end, their own and their descendants' bodily and mental

constitution."* And in his work on Education he has a chapter "*On the laws of hereditary descent,*" on reading which, I was forceably impressed with the idea that a few certain pages from *Fruits of Philosophy*, would be a most appropriate appendix to it, as they contain information that would enable and induce people to observe those laws of hereditary descent and degradation, which it is so important should be obeyed. From this chapter I shall here present some extracts, as being not only consistent with the general design of this work (which is to put into the hands of young men and women—information not easily obtained elsewhere—which they ought to have), but as tending to show the *importance* of the anti-conception art, as a means to be resorted to in preserving and improving the species.

"The development of the human body is favoured, retarded, or disordered, according to the general laws of organization, in the same way as that of other living beings, animal and vegetable. Consequently, children participate in the bodily configuration and constitution of their parents, and also in the particular manifestations of the mind, these being dependent on the individual parts of the brain. * * * We might naturally suppose this fact sufficient to induce reasonable beings to take at least as much care in regard to their

* *Phrenology*, vol. i. p. 155. Boston.

offspring as they do in relation to their sheep, pigs, dogs, and horses. But man wishes to make himself an exception from the immutable laws of Nature, and the result of his ignorance and self conceit is lamentable.

"For the sake of bodily health, many natural philosophers, a long time ago, insisted on the necessity of a better regulation of marriage. Their benevolent design was supported by the constant observation, that health depends on organization, and that the latter is propagated by birth. 'Sir John Sebright,' says Dr. Adams, 'informs us, that if a stock of sheep, in which there is any defect, are permitted to breed in and in the defect will gradually increase among them; and Colonel Humphries, by selecting for breeding a marked variety, has succeeded in procuring a stock with deformed bones., * * * * There are few families where there is not one part of the body weaker than the rest, the lungs, for instance, the eyes, the stomach, the liver, intestines, some other viscera, the brain, &c.'

"Children born of healthy parents, and belonging to a strong stock, always bring into the world a system formed by nature to resist the causes of disease. While the children of delicate, sickly parents, are overpowered by the least unfavourable circumstance. In curing diseases, nature is often-times more powerful than art, and the latter is ineffectual if not assisted by the former. Longevity

depends more on innate constitution than on the skill of physicians. Is it not astonishing, then, that this knowledge, as a practical piece of information, is not taught to, and disseminated among young people? Indeed it ought to be familiarly and generally known: not because it is expected that every one would be reasonable enough to regulate his conduct by it, but in order to induce as many as possible to do so [a knowledge of the anticonception art should greatly increase the number that would do so.] A great number are too selfish to be guided in their own enjoyments by a regard to the condition of their offspring; but many, on the other hand, who reflect on the future, may be induced to avoid, even from a selfish motive, a union with a person who will be likely to embitter their future days. Even the unthinking must perceive, that the enjoyments of life are rendered impossible, when diseases make their ravages in a family; and that love, for the most part, ceases, when poverty takes up its abode in the house. Others, who wish to live in their posterity, will, when acquainted with the immutable laws of nature, submit to them, in order to lay a foundation for the prosperity of their descendants. The *physical* education, then, of both sexes, deserves the greatest attention, and it is unpardonable to neglect that of girls."

The manifestations of mind depend on the nervous system, and certain feelings and intellectual

powers, are transmitted from parent to child. Here then, is an additional motive to be careful in the choice of a partner in marriage. No person can be indifferent about having selfish or benevolent, stupid, or intelligent children. The condition of the mother is commonly less valued than it ought to be. It is, however, observed that boys commonly resemble their mother, and girls their father, and that men of great talents generally descend from mothers of a superior organization. Spurzheim farther remarks,

"He who can convince the world of the importance of the laws of hereditary descent, and induce mankind to conduct themselves accordingly, will do more good to them, and contribute more to their improvement, than all institutions, and all systems of education; families and nations might be improved beyond imagination, in figure, statute, complexion, health, talents, and moral feelings."

If a nation should ever be aroused to the importance of this subject, and any general attempt should be made to improve the species by attending to the laws of hereditary descent, of what vast utility in furthering this attempt would physiological checks to conception then be seen to be! None would need be debarred from gratifying their instinct, while the species would be propagated only by the best of breeders! Improvement would progress from generation to generation, until there

would again be "giants in the land," both physical and mental!!!

Fifth. By the art much misery may be prevented: by preserving the character of the lecherous, by preventing artificial abortions, and by diminishing infanticide. I know that some unfeeling would-be-thought-to-be conservators of "Public Morals," which is much talked of as if it were something distinct from the *acts of individuals*, but of which no other idea can be formed, I know that some such, ignorant of human nature, and satiated by gratification, preach up the doctrine that the characters of those unfortunate beings, whose organization is such (together with the circumstances by which they have been surrounded) that their feelings have been too strong for their discretion, *ought not* to be preserved; but that their missteps, though taken with no ill intent to any one, ought to become known to the world; and yet, the punishment which society inflicts in such a case, far exceeds what is often inflicted by legal authorities upon the criminal of evil intentions. With such men I differ entirely in opinion. Their views of human nature and their system of ethics—if they have any—must be essentially different from mine. Human happiness is not promoted, either directly or in the long run, by having these missteps made manifest to the world. No reason can be given why it should be so promoted, except that it may prevent others

from taking the like missteps. But this is not a good reason. Let us examine it. I might in the first place demand of these men to make it appear by *sound* reasoning how much real evil—how much real misery, over and above the happiness—attends or arises from any of these missteps, *provided that none of them are followed by conception*. We know that young widows, not encumbered with children, are as readily taken in marriage as those who have ever remained single. But admitting that illegalized embraces are as evil as the heretofore liability of their causing conception has rendered it necessary for mankind to regard them, (and I shall hereafter show *wherein* they would be of evil tendency, though never followed by pregnancy) still I think they are not to be rendered less frequent by having some of them made manifest to the world by illegitimate births. Why should they? Fear of conception, which some seem to regard as the principal preserver of chastity—though it is the preserver of only that kind of chastity which it *does not* preserve!—fear of conception, I say, would not be weakened, if the birth of an illegitimate should not occur in a ten mile circle once in five years. If no such births should occur, still all would know that conception is liable to occur, if a chance be given; and it would not be known but that the infrequency of such births was owing to infrequency of illegal intercourses. On the other hand, what most rare-

ly happens is most talked about. The tree which stands alone upon the plain is most noticed. Only let the births of illegitimates become quite rare, and this very circumstance will serve to still render them so. The innate modesty of females shrinks from the idea of standing alone, degraded, as the subject of the world's observation and remark. It is something so with males. But what is common is but little regarded. When a man can look about him and see that parson A, lawyer B, doctor C, and farmer D have been in scrapes,—lord ! what does he care, comparatively, if he too gets into one ? I say, then, that the only reason which can be given why the doings of the amorous should be suffered to become known, is not a good reason.

But there is yet another idea of this subject. I leave the reader to imagine the misery of the unfortunate female, as alone she weeps, who knows that a few months must develop that which will degrade her in the eyes of the community ; I say nothing of her paramour, who *may* be a generous but warm-hearted young man—but then, their *relatives*—their parents, brothers, and sisters. Think of a large family of sisters who feel (though they ought not) that odium is brought upon them by an act of which they are entirely innocent. Ought the just to suffer for the unjust ? Is this the way to promote human happiness—to bring sorrow upon a whole family, when a little medicated wa-

ter, without injury to any one, would have prevented the cause of it? Of artificial abortions, which are doubtless produced daily within the United States, I scarcely need speak. All will readily admit that prevention is better than cure. Nor need I attempt to tell how miserable that female must be who is forced to commit an act so abhorrent to her own natural feelings, and so pregnant with danger to her own life, as that of killing her infant child. Stop, reader, and ponder on these subjects. Ask *yourself* if pregnancy is not what would give to the seduction of one of your daughters its sharpest, deepest sting.

Sixth. In a medical point of view, great benefit may be derived by resorting to the art. Many women are so subject to flooding on "lying in," that it is extremely difficult to keep them alive; and some die from this cause, even in the presence of their physician. I do not here speak of floodings *before* the birth of the child, which may occur to any one, and yet the patient be no more liable to them afterwards, than any other one. I allude to those cases, not rare, in which flooding occurs after the birth of every child, and generally becomes worse each succeeding birth; rendering the woman so feeble (if life be saved) that nervous and dyspeptic complaints arise, and, altogether, render her unfit for business or enjoyment for months. And when she does at length partially recover her strength, pregnancy again occurs, bringing along

with it its usual diseases—which her still feeble system is ill able to bear—and an anxiety and sorrow of mind, which is the very essence of misery—causing her to weep half the time, perhaps for weeks, a state of mind which greatly assists the other diseases in debilitating the system. And the debility and irritability induced by these combined causes, increases still further the tendency to flooding. Thus it is, that some cases get to running. The woman passes many years of her prime in uselessness and misery. I have seen such cases, and have every reason to believe they were remedied by *the art*.

I will not describe the scenes that not unfrequently occur in the chamber, where the wife and the mother, perhaps of a large family, is dying, or is supposed to be instantly dying, by loss of blood; but whoever has witnessed such a scene will not condemn this work, if he believe it may be the means of preventing only a few of them.

In other cases, the deformity of the pelvis is such that the woman cannot be delivered of a living child. Its head must be perforated, or it must even be dissected, and extracted in pieces—an operation painful and hazardous to the woman. Indeed, sometimes not even this can be done, and the woman must die, for the Cæsarean operation but rarely saves her. It is true that these deformities of the pelvis will rarely be known until the woman is in labour with her first child; but it is

no small matter to be able, afterwards, to avoid pregnancy without sacrifice of enjoyment. This is a general remark that will not strike the unreflecting reader like a particular fact; and as most readers are of this class, I will here give a particular case that has recently been related to me. A young married woman was told by her physician, after her first child had been taken from her, that she must not again become pregnant, as probably she could not live through the operation of being delivered. She had much affection for her husband, and he for her, so they continued to live together, but slept in separate beds. After some time had passed in this way, she went to his bed and said, "I have come to receive my death wound." She conceived, and died in child-birth.

I believe this to be a true story, but if not, it is certainly an affecting and a rational one, and not essentially different from many other cases. May the curse of Nebuchadnezzar fall upon the creature that would prevent the information contained in this work from reaching such a woman!

These cases of distorted pelvis, or rather the necessary operations by which they give rise, are the evils to which Burns alludes in his *Principles of Midwifery*, vol. i, p. 236, where he recommends producing abortion by taping the ovum, "in order to prevent a greater evil." But is not

even taping the ovum a greater evil than preventing conception? Certainly it is. And had the lecturer of Glasgow or any other writer on midwifery known the method I propose for preventing conception, it certainly would have been recommended in cases of known contraction of the pelvis instead of artificial abortion. I mention this circumstance in defence of my claims to originality, which some have seemed disposed to deny me. I have heard of some physicians saying that the check which I propose has long been known to the medical profession, and in my travels I once met with a physician apparently of respectable standing, who made the same remark. We were strangers to each other, and on my defying him to produce any work, published prior to the first edition of this work, that contains any such idea, he appeared all at once to be apprehensive that he was talking with a physician, and replied that "he did not know as the idea was to be found in books, but it had been handed down orally, from one physician to another!" It is all false.

With many women the sympathetic diseases of pregnancy are so very severe that it is extremely desirable that pregnancy should in future be avoided. They are sometimes so severe that abortion or premature delivery has with the utmost propriety been resorted to, as the only means of saving the life of the patient. But this course has not been

so frequently resorted to as it ought to have been. A few months ago, and within a few miles of me, a woman's life was destroyed by vomiting. But if her physicians, being sensible of the danger she was in, had considered that when gestation ceases, the sympathetic diseases of pregnancy also cease, and had accordingly punctured the membranes, her life would probably have been preserved.

But cases in which the utility of the art, in a medical view, is, perhaps, still more conspicuous, are those of *habitual abortion*. These cases have generally been found very difficult to remedy. Many a woman has miscarried five, ten, twenty, and even more times. Conceptions and abortions follow each other in such close succession that no time is given for the powers of the system to be restored. Her life is miserable. But let conceptions be prevented until the uterine system shall have time to regain its vigor, or to loose its habit of throwing off its contents at or near a certain period of gestation, and the woman may yet give birth to an heir. I have already had experience in two cases, confirmatory of the utility of the art in these cases.

I have thus far presented the advantages of the art, rather as a means of preventing misery, than as a direct means of promoting that most distinct and positive portion of happiness, called pleasure; and it is in the former light that I feel most disposed to recommend it. But doubtless there are

many persons in affluent circumstances, of well formed bodies, and good constitutions, who think (and surely every one must be admitted to be his own best judge) that *their* happiness would be promoted by the power to limit and regulate the births of their children. Men of buisness or of pleasure, who may wish to be from home some eight or ten months from the time being, who may wish, perhaps, to visit some foreign country, with or without their wives, may so manage that the latter shall not be confined only when both are at home.

Many advantages of the art I have now weighed, as in the balance, against the only *two* evils I have ever heard urged against it. Probably other advantages may hereafter be found to arise from it. It is rarely the case that all the useful applications of any discovery in the sciences are seen at once or ever seen by the one who makes the discovery. If the increase of the human species, by simple and safe means, can be regulated and controlled, without warring against nature, as I am sure it can, it is certainly an important point gained; and all philanthropists—all real reformers—will “stick a pin there,” and then look further, before they censure the man or men who have made the discovery.

CHAPTER II.

GENERATION.

By the term generation I here mean all those actions that take place in organized beings, whether male or female, that are peculiarly and essentially necessary in the reproduction of the species. In this sense, generation is a process consisting of many steps, some of which are known and others unknown. These unknown steps have given rise to conjecture or hypothesis; and as one man has as good right to conjecture as another, many conjectures have been offered concerning each of these unknown steps; and as every one of these conjectures, is termed an hypothesis it is not strange that Drelin-court, who lived in the latter part of the last century, was able to collect 260 hypotheses of generation.

The most eminent physiologists have investigated the subject of generation with a labour and zeal indicative of a presentiment, that some great good to mankind would be derived from a correct and perfect knowledge of this process. But there is nothing on record, so far as my reading extends, to show in *what way* they supposed this good would

be derived from such knowledge; nor can I conceive of what practical utility it can be, except as a means of enabling us to promote and *prevent* conception. It seems to me, indeed, that here is the place, and now is the hour, to settle, if possible, this long disputed subject; and such is the importance of the leading object of this book that I should feel justifiable in writing a large volume on the single subject of generation, if it were necessary in accomplishing this object. But I think I may pass over many disputed points, many conjectures, many arguments, and even many facts, and yet present such a view of the subject as shall inspire confidence in the means of preventing conception, which I shall, in the course of this work, propose.

It must be obvious to every person of common understanding, that it would be as impossible to explain any process or function of the animal economy, so as to be understood, before the organs which perform the function have been described, as it would be to explain the operation of an intricate piece of machinery by words, without first naming the several parts of it, and pointing out their several relations to each other. No writer can be understood when he uses terms that have never been defined to the reader, and what is a system of descriptive anatomy but a *dictionary* of the animal system, containing the names of organs so defined, that is, the organs so described, that the reader may form ideas of what is meant by these names? Hence it is that

physiologists, although they usually write for those who have already studied anatomy, always precede their explanations of functions by a more or less complete description of the organs that perform the functions. I shall so far pursue the same course as to define all the anatomical terms that will necessarily be used in treating of conception.

SECTION I. *Of the Male.*—The male organs of generation are the testicles, vesiculae seminales, prostate gland and penis.

The *testicles* are two ovoid bodies situated in the scrotum. In size they vary considerably in different individuals. But the "amitiveness" of individuals is by no means always in proportion to the size of these organs. They are first formed in the abdomen, and if, in some rare cases, they never descend into the scrotum, virility is not by this circumstance impaired. Their office is to secrete or form the principal part of that fluid which is emitted in sexual intercourse, called *semen*. The excretory duct of the testicle is called *vas deferens*, and it forms a part of the spermatic cord which may be felt extending from the testicle to the lowest part of the abdomen or belly where it dips into that cavity, and crooks about in such a manner as to open into the urethra. The *vesiculae seminales* are two small irregular bodies situated at the lower and posterior part of the bladder, near its neck, and of course between the bladder and that extreme portion of the intestinal canal called *rectum*.

Each of these vesicles opens into the vas deferens of the same side, and it has been supposed that the secretion from the testicles passes into them—that they are in fact seminal reservoirs. But this opinion is probably incorrect. The *prostate gland* is a firm dense body resembling in shape a chesnut, but a little larger. It is situated at the neck of the bladder, and in such a manner as to surround the urethra. This gland secretes a small quantity of whitish fluid, which mixes with the semen on its passage through the urethra. The *penis* is an oblong body composed of three principal parts, besides its integuments, namely, the corpora cavernosa, and the urethra, with its spongy covering, called corpus spongiosum urethra.

The *Corpora Cavernosa* are two irregular cylinders, having a strong, dense, elastic membrane without, and a substance of a cellular structure within. These two bodies unite soon after their origin from the bones of the pelvis, and form the principal part of the body of the penis. Divested of their covering, they still retain the appearance of two cylinders applied to each other lengthwise, for above these is a superficial groove passing in that direction, which is occupied by a vein; and below there is a much deeper groove occupied by the urethra.

The *Urethra* is the canal which extends from the bladder to the orifice at the extremity of the penis. It is formed of membrane; and having

passed through the prostate gland, it is surrounded, within three fourths of an inch of that body, by a spongy substance, said by some to consist of a plexus of veins. This is the *corpus spongiosum*. It extends along the urethra to the extremity of the penis, and there expands over the ends of the corpora cavernosa, cap-like, and thus forms the *glans penis*, the abrupt and prominent edge of which, is called the *corona glandis*, and is endowed with much sensibility.

Along the course of the urethra are the orifices of many mucous ducts or sinuses, which pass obliquely backwards. They secrete the mucus which lubricates the urethra and defends this highly sensible organ from the acrid urin. Under some circumstances so much of this mucus is secreted that it makes its appearance at the orifice of the urethra. When these sinuses are inflamed they secrete the puriform discharge which takes place in gonorrhœa.

Of the integuments which envelop the several organs I have now described, no particular description is necessary. I may remark, however that the loose fold which lies around, and sometimes extends beyond the *glans penis*, is called in scripture language the *foreskin*, in anatomical the *prepuce*; and that small longitudinal fold which is always attached to the lower angle of the orifice of the urethra is called *frenum*.

Blood is sent from the heart to all parts of the

body by *arteries*, and returned to the heart by *veins*. The penis, like all other erectile organs, as the nipples and clitoris, is *plentifully* supplied with these vessels. Like all other parts in which a sensation can be excited, it is also furnished with *nerves*. But I shall not confuse the reader with a particular description of these vessels and nerves.

The distention or *erection* of the penis is a phenomenon not yet fully explained. We know that when this distention exists, the cellular parts of the corpora cavernosa are filled with blood; we know that titillation, as well as certain thoughts, give rise to this congestion or turgescence, but in what way these thoughts produce this effect, we do not exactly know. Plausible conjectures might be offered, but it would be occupying to much room to no very useful purpose.

The pleasurable sensation experienced by the male, is mainly owing to the state of the nerves of his genital organs, and I believe principally to that of the nerves of the urethra and glans penis. The nerves of the urethra are in such a state that the semen passing over them excites the *greatest* degree of pleasure, but the nerves of the glans penis, and especially of the corona glandis may be pleasurable excited by external agents, and without any seminal emission. By the state of these nerves I not only mean their peculiar organization, their *nature*, but also the condition they may be in at the time. Their condition may

suddenly and frequently vary, but their organization changes very gradually, if at all. It may be different in old age than in youth.

The penis is an organ which differs very much in size in different individuals. But the power of giving and receiving pleasure depends but very little upon the size of this organ. Four or five inches in length, and one in diameter will do very well, though I suppose this is considerably less than the average size. I am induced to make these remarks by the recollection of an inexperienced young man, who was in a most unhappy state of mind, and restraining from marriage, because he entertained the false notion, that he could not give a female partner complete satisfaction, owing to the somewhat diminutive size of his member.

I have said that the pleasurable sensation is mainly owing to the state of certain nerves. But I believe it depends in some degree on the quality of the semen. When emissions are rare, the semen is more thick—owing to the absorption of its thinner parts—and it emits a stronger odour, hence it is but reasonable to suppose, that it is capable of making a stronger impression upon the nerves of the urethra; and consequently the stronger sensation experienced after abstinence is not wholly owing to the accumulated excitability of these nerves.

All our organs were made to act, or else made in vain, for they can perform no office without ac-

tion. And it is essential to their full development and good condition, that they be exercised in some greater or less degree. If our muscles are not exercised, they become weak and diminish in volume; if we sleep too much and think but little our intellects become dull. On the other hand, if these organs are excessively excited they are thereby injured: either their organization is impaired, their excitability is exhausted, or perhaps they have even so drawn upon the common stock of vitality (whatever sort of material this may be) that the digestive organs have been robbed and debilitated to such a degree that they cannot furnish a due supply of material for the formation of the unknown nervous energy, in the existence of which all physiologists believe, and upon which most of our vital actions essentially depend. So it is with the genital organs. During a short abstinence, they acquire increased excitability, just as the brain and muscles do by short periods of rest; but let this abstinence be very long continued, and their share of nervous energy seems to take a different course. The individual will not so frequently *desire*, as if he had been in the habit of enjoying himself at shorter intervals.

Of the Semen.—The fluid emitted by the male consists of a secretion from the testicles, the vesiculae seminales, the prostate gland, and perhaps from two small bodies called Cowper's glands, which I have not thought it worth while to de-

scribe. This compound fluid is what is commonly meant by the term *semen*; and it is this only that has been examined by physiologists, naturalists, and chemists. Were I attempting to give a complete view of generation, I should speak of the powers by which these fluids are retained, circulated and ejected, but I proceed to speak of the physical, chemical, and physiological properties of the compound fluid. "At the moment the *semen* passes from the urethra, it is composed of two substances, the one fluid and the other thick and nearly opaque. When left to themselves these substances mix, and the mass liquifies in a few minutes. The odour of the *semen* is strong and peculiar, its taste saltish, and even a little acrid."* Chemically examined, it has been found by Professor Vauquelin to be composed of 900 parts of water, 60 of animal mucilage, 10 of soda, and 30 of phosphate of lime. Its physiological property consists in its power to impregnate. But to be more particular:—

When the *semen* is examined by the microscope, there can be distinguished a multitude of small animalculæ, which appear to have a rounded head, and a long tail. These animalculæ move with a certain degree of rapidity; they appear to avoid the light, and to delight in the shade. They have been found in the seminal fluid of all ani-

* "Summary of Physiology," by F. Magendie, as translated by John Revere, M. D., p. 385.

imals whose semen physiologists have been able to collect and examine—differing somewhat in different kinds of animals, yet bearing a close resemblance to each other; and they are unlike the animalculæ of any other fluid. “They cannot be detected in the semen, when either from age or disease, the animals are rendered sterile.”* Leeuwenhoek, if not the discoverer of the seminal animalculæ, was the first who brought the fact of their existence fully before the public. With respect to their size he remarked that ten thousand of them may exist in a space not larger than a grain of sand. He believed them to be the germs of future animals—that they are of different sexes, and even thought that he could discover such difference.

Buffon and Needham, two distinguished naturalists, regarded the seminal animalcules, not as regularly organized and independent beings, but what they merely termed vital particles. In this, however, they differed with most philosophers. Bostock gives us quite a list of most respectable authors who have given their full assent to the accuracy of Leeuwenhoek’s descriptions of these animals. But what I most wish to impress upon the reader’s mind is, that whether the seminal animals were regarded as such in reality, or only as vital particles, all seem to have agreed that in

* Bostock’s Physiology, vol. iii. p. 23.

some way or other, they are essential to impregnation. Magendie, however, tells us that Spallanzani has proved by experiments that they are not necessary to this end. But Bostock, a later writer than Magendie, mentions no such fact ; on the contrary he says that, "if the experiments and observations of Spallanzani and the Genevese physiologists are to be relied on, we can scarcely refuse our assent to the position, that these animalcules are, in some way or other, instrumental to the production of the *fœtus*." For my own part, I cannot imagine how it can be proved by experiment that they are not necessary. Are we for a moment to suppose that every one of these microscopic animals have been taken from a portion of semen, and the remaining fluid so used as to produce conception ? It is true that Spallanzani believed the semen to act only as a peculiar stimulus to the female organs, and not, like Leeuwenhoek, that it furnishes any material which enters into the composition of the *fœtus*. But this is not to deny that the seminal animalcules are necessary to fecundation ; for the supposed stimulating quality of the semen may be dependent on them. The experiments of Spallanzani to which Magendie unquestionably alludes, do not warrant the conclusion he has drawn from them. I will here present Bostock's brief account of them, that the reader may the better judge for himself.—"Having ascertained that in many of the oviporous

quadrupeds impregnation takes place out of the body of the female, he [Spallanzani] was induced to try whether he could not effect the operation, by applying a portion of the seminal fluid to some of the detached ova. He found that the quantity which was necessary was very small, and upon diluting the semen with water until the mixture contained not much more than one three thousandth part of the secretion, he found that a drop of this diluted fluid was capable of producing impregnation."* Is this extreme dilution any proof that not a single animalcule came in contact with each ovum that was impregnated? or any proof that these animals or vital particles are not in some way or other necessary to fecundation in the human species?

"The secretion of semen commences at the age of puberty; before this period the testicles secrete a small quantity of viscid transparent fluid, which differs essentially from semen. The revolution which the whole economy undergoes at this period, such as the tone of voice, the development of hairs, the increase of the muscles, the bones, &c., is intimately connected with the existence of the testicles, and the secretion of this fluid. Eunuchs preserve the same form as in childhood; their larynx does not increase, their chin is not covered with hair, and their disposition is general-

* System of Physiology, vol. iii. p. 51.

ly timed; and finally, their physical and moral character very nearly resembles that of females. Nevertheless many of them take delight in venereal intercourse, and give themselves up with ardour to a connexion which must always be unfruitful." (Magendie.)

In case the testicles are absorbed, as sometimes, though rarely happens, the individual is probably placed upon an equal footing with the eunuch in respect to his virile powers; but if only one testis perish, or be otherwise diseased, he may get children of either sex. The pleasure of the female, I opine, depends very little if at all on the mere emission of semen. I make this remark in this place, because, rare as are the instances of atrophy of the testis, I have been consulted in such a case by a young man otherwise in good health, as to the fairness and propriety of his entering into the matrimonial state.

SECTION 2. *Of the Female.*—The female organs of generation are described by anatomists under the two heads of External and Internal Organs.

Of the External.—The female orifice commences immediately below that prominence which is termed *Mons Veneris*. On each side of this orifice is a prominence continued from the mons veneris, which is largest above, and gradually diminishes as it descends. These two prominences are called the *Labia Externa*. Their conjunction below is denominated the *sourchette*. The space

between the place of their junction and the anus is rather more than an inch in extent, and is called the *perineum*. In the upper angle formed by the labia externa, a small cylindrical body is situated, which receives the name of *Clitoris*. It is in most of its length pretty closely confined to the bone; and is of variable size in different females. It is analogous in its structure to the penis, except that it has no urethra. It is exquisitely sensible; being, as is supposed, the more particular seat of pleasure. Like the penis it is subject to distention, and from like causes. It is an excessive development of this organ, more frequently, perhaps, than any other abnormal structure, that has given rise to stories about hermaphrodites.

The skin which lines the internal surface of the labia externa is folded in such a manner as to form two flat bodies, the exterior edges of which are convex. They are called the *Nymphae*. They extend downward, one on each side from the clitoris to near the middle of the orifice, somewhat diverging from each other. Their breadth is in some instances very great; but in most cases about equal to one fourth of their length. They are well supplied with blood-vessels, and probably somewhat tumid on certain occasions. They have been supposed to regulate the course of the urine in its flow from the urethra; and to favour the necessary enlargement of the parts in parturi-

tion. The orifice of the *urethra* (the canal, short in females, which leads to the bladder) is situated rather more than an inch further inward than the head of the clitoris, and is a little protuberant.

Passing by the external lips, the clitoris, the *nymphae*, and the orifice of the *urethra*, we come to the membrane called the *Hymen*. It is situated just at or a trifle behind the orifice of the *urethra*. It is stretched across the passage, and were it a complete septum, it would close up the anterior extremity of that portion of the passage which is called the *vagina*. But the instances in which this septum or partition is complete, are very rare; there being, in almost all cases, an aperture either in its centre, or, more frequently in its anterior edge, giving the membrane the form of a crescent. Through this aperture passes the menstrual fluid. Sometimes, however, this septum is complete, and the menstrual fluid is retained in the *vagina* and *uterus*, month after month, until appearances and symptoms much like those of pregnancy are produced, giving rise, perhaps, to unjust suspicions. Such cases require the simple operation of dividing the *hymen*. In many instances the *hymen* is very imperfect, insomuch that some have doubted whether it is to be found in the generality of virgins. Where it exists it is generally ruptured in the first intercourse of the sexes, and the female is said to loose her virginity. In some rare instances it is so very strong as not to be ruptured

by such intercourse; and the nature of the difficulty not being understood, the husband has sued for a divorce. But all the difficulty may be removed by a slight surgical operation. The hymen is peculiar to the human species.

The *Internal* female organs of generation, are the vagina, the uterus, the ovaries, and their appendages.

The *Vagina* is a membranous canal, commencing at the hymen and extending to the uterus. It is a little curved, and extends backwards and upwards between the bladder, which lies before and above it, and the rectum, which lies behind, and somewhat *below* it—even in the erect position. It is rather more narrow at its beginning than it is further inward, and is larger in those who have borne children than in those who have not. The coat or membrane which lines the internal surface of the vagina forms a number of transverse ridges. These ridges are to be found only in the lower or anterior half of the vagina, and they do not extend all around the vagina, but are situated on its anterior and posterior sides, while the lateral sides are smooth. It may be well to remember these ridges, and all other parts in and about the vagina, as a knowledge of them is calculated to lead to a more thorough use of the check I shall hereafter mention. In those who have borne children these rugæ or ridges are not so prominent as in others. Throughout the extent

occupied by these rugæ, are to be seen, in some cases with the naked eye, the orifices of mucous follicles or ducts, which occasionally discharge considerable quantities of mucus.

Exterior to this lining membrane of the vagina is a dense cellular or fibrous structure, of a lightish colour, and very vascular. It may be very much distended, and seems to have a contractile power. At the anterior extremity of the vagina, on each side of it, there is, superadded to this, a cellular or vascular substance, from two thirds of an inch to an inch in breadth ; which when cut into resembles the corpora cavernosa, or the corpus spongiosum of the penis. These bodies commence near the body of the clitoris, and extend downwards on each side of the vagina. They have been called *corpora cavernosa vaginae*, and are supposed to be occasionally distended with blood. These corpora cavernosa are covered by muscular fibres which constitute the *sphincter vaginae muscle*, and contract the vagina at the place where they are situated.

Probably this muscle is in some degree under the control of the will, (for all sphincter muscles ought to be) and as a few small muscles of the human system are powerless in most persons, because they have seldom or never been called into action, it is not unreasonable to suppose that the power of this may be increased by repeated voluntary efforts.

The *Uterus* or womb is situated between the bladder and rectum, but above the vagina. Such-

is its shape that it has been compared to a pear with a long neck. There is of course considerable difference between the body and the neck, the former being twice as broad as the latter. Each of these parts is somewhat flattened. In subjects of mature age, who have never been pregnant, the whole uterus is about two inches and a half in length, and more than an inch and a half in breadth at the broadest part of the body. It is near an inch in thickness. The neck of the uterus is situated downward, and may be said to be inserted into the upper extremity of the vagina. It extends into the vagina the better part of an inch. The uterus is suspended in its situation by certain ligaments, with a description of which I shall not confuse the reader. But I may remark that these ligaments sometimes become weak and relaxed, suffering the uterus to settle downwards, which state of the organ is familiarly called a "bearing down." In the uterus is a cavity, which approaches the triangular form, and from which a canal passes downward through the neck of the uterus into the vagina. This cavity is so small in the unimpregnated state that its sides are almost in contact, so that the uterus is a thick firm body for so small a one. Comparing the cavity of the uterus to a triangle, we say the upper side or line of this triangle is transverse with respect to the body, and the other two lines pass downwards and inwards, so that they would meet and form an angle below, did they not take a course less inward so as to

form the canal through the neck. In each of the upper angles of this triangular cavity there is an orifice of such size as to admit a hog's bristle. These little orifices are the mouths of two tubes, called the Fallopian tubes, of which more will be said presently. The canal which passes through the neck of the uterus, connecting the cavity of this organ with that of the vagina, is about three lines [twelve lines make an inch] in diameter.* It is different from other ducts, for it seems to be a part of the cavity from which it extends, inasmuch as when the cavity of the uterus is enlarged in the progress of pregnancy, this canal is gradually converted into a part of that cavity. It is about an inch in length. On the anterior and posterior portions of its surface are many small ridges, most of which have a transverse direction; and in the grooves between these ridges are the orifices of many mucous ducts. This canal is constantly lined, if not filled, with a thick ropy mucous. The cavity of the uterus (which in the unimpregnated state would not admit more than a bean) is also constantly filled with such mucous.

* All the canals, tubes, mouths, and other parts that I am now describing, have a bearing on an important question which will yet come before us; and if the reader wishes to be qualified to judge for himself he must remember them.

The lower extremity of the neck of the uterus is irregularly convex and tumid. The orifice of the canal in it, is oval, and so situated that it divides the convex surface of the lower extremity of the neck into two portions, which are called the *lips* of the uterus--the anterior of which is larger and more tumid than the posterior. The orifice itself is called *os tincæ*, *os uteri*, or, in English, *the mouth of the womb*. With those who have borne many children, or when the parts which sustain the uterus are much relaxed from any cause, the mouth or neck of the uterus is quite low,—even resting on the perineum; and in almost all cases it may be easily reached by a finger introduced *per vaginam*, especially by a second person, who so proceeds as to have the perineum press upon the space between the fore and middle finger of the right hand.

Some have been disposed to deny that the uterus is a muscular organ, but this is a dispute about words, for it is certain that it contracts powerfully on certain occasions. It is by this means that it expels its contents. Labour is but very little if at all assisted by the voluntary—more strictly the instinctive—efforts of the abdominal muscles.

The very great increase in the size of the uterus, in case of pregnancy, is not attended with any considerable diminution of thickness in its

substance. Its blood vessels are much enlarged, and its structure is more evidently fibrous and muscular.

The *Ovaries*, or ovaria, are two bodies of a flattened oval form; one of which is situated on each side of the uterus on the posterior surface of the broad ligament, at some distance from the uterus. It is generally between ten and twelve lines in length. Each ovary or ovary is formed by an external, firm membrane, and the interior by a peculiar cellular tissue, of a soft texture, and well supplied with blood vessels. In those of a mature age, who have never conceived, each ovary contains from ten to twenty *vesicles*, formed of a delicate membrane, filled with a transparent fluid. Some of these vesicles are situated so near to the surface of the ovary as to be prominent on its surface; others are near the centre. They are very different in size, the largest being between two and three lines in diameter. In those who have ever conceived, one or more of these vesicles have been removed, and in their place a cicatrix or scar is formed, which continues through life. However, the number of cicatrices does not always correspond with the number of conceptions, as once supposed. They often exceed it, (after allowing two for twins, and so on) and are sometimes found where conception has not been known to have taken place. These vesicles bear much the same relation to women, that the unimpregnated eggs of

birds, reptiles, and fishes do to them. The place in the ovary, left by the vesicle, is filled with a yellow substance, called *corpus luteum*. In a few months it is absorbed, leaving nothing but the cicatrix.

It is true that the condition of the uterus has great influence on the whole system, as to health; yet the peculiarities of females are more especially dependent on the ovaria; and when they are not developed, as sometimes happens, the effects on the economy, though not similar, are analogous to those of emasculation on the male.

The *Fallopian Tubes* are two canals from four to five inches in length, which proceed between the laminæ of the broad ligaments, from the upper angles of the cavity of the uterus, in a transverse direction to some distance from the uterus, when they form an angle, and take a direction downwards towards the ovaria. At their commencement they are very small, their mouths only admitting a bristle; but they enlarge as they progress; and their large extremities, having left the broad ligaments, hang loose in the posterior chamber of the pelvis, hard by the ovaria. The margins of their large and open mouths consist of fringed processes; each margin is oblique with respect to its tube; and the longest of the fringed processes hang from the lowest side of the margin, while the others regularly diminish on each side of them. These processes constitute the

Fimbriæ of the fallopian tubes. They are highly charged with blood vessels, and well situated to grasp the ovaria, as they do in case of conception.

Menstruation.—A function of the uterus, obviously connected with the process of reproduction, is that of menstruation. It consists in a monthly sanguineous discharge, termed the *menses*; and to have it is *to menstruate*. The age at which menstruation commences varies with different individuals, and also in different climates. The warmer the climate, the earlier it commences and ceases. In temperate climates, it generally first appears at the age of fourteen or fifteen, and ceases at forty-five, or a little later. Whenever it commences, the girl is said to arrive at the age of puberty, and acquires a more womanly appearance. Though it be of a darkish red colour, it cannot properly be called blood; for it does not coagulate nor separate into different parts. It is a secretion of the uterus, i. e., the minute vessels distributed to the inner coat of the uterus select, as it were, from the blood, and pour out in a gradual manner, the materials of this fluid. The duration and quantity of this discharge, and even its colour and consistence, are quite variable; but generally speaking it amounts to six or eight ounces, and is from two to four days' continuance. When it continues eight or ten days, it acquires the properties of arterial blood, and may be considered as a disease. During menstruation, the susceptibility of females is much

increased, noise frightens, and a slight contradiction affects them. Various unpleasant feelings attend it. The regularity of the return of the "monthlys," "turns," or "courses," the nature and quantity of the fluid evacuated, and the duration of the evacuation, are all intimately connected with the health of the individual, and deserve the particular attention of physicians; and, in case of girls, of older and more experienced friends.

No female, but the human, is subject to this evacuation; and various, but unsatisfactory reasons, have been assigned for this peculiarity.

Menstruation does not take place during pregnancy or nursing; unless the latter be continued too long—in which case the milk becomes bad. Some, however, are subject to a sanguineous discharge that occurs with considerable regularity during pregnancy, and leads them to believe that they have their courses at such times, but it is extremely difficult for physicians to admit this—knowing that the inner surface of the uterus is now lined with a membrane which adheres to it, and has no outlet. They believe such discharges to be real blood. For myself, however, I see no difficulty in admitting that the vessels about the mouth and neck of the uterus may *secrete* these discharges, especially when we consider that the menstrual discharge does not always take place from the uterus, but, in some rare instances, from the mucous membrane of the bowels, stomach,

lungs, and even the eye. Indeed, even the skin has been known to discharge blood periodically ; thus it has been known to issue monthly, from one or more of the fingers, the cheek, the skin of the abdomen, &c., unnecessarily alarming the patient and her friends.

The use of menstruation seems to be to prepare the uterine system for conception ; for females do not conceive before they commence nor after they cease having their courses ; nor while they are suppressed by some disease, by cold, or by nursing, or are attended with great pain. Many credible women, however, have said that they became pregnant while nursing without having menstruated since their last accouchement. It is believed that in these cases they had some discharge, colourless perhaps, which they did not notice, but which answered the purpose of the common one. The fact is, the old adage that "there are exceptions to all general rules" holds true in relation to many functions of the animal economy ; thus although women generally conceive soon after and not soon before being *unwell*, yet they *may* conceive at any time ; and I am acquainted with one author, no less respectable than Magendie, who says, "Young girls have been known to conceive before menstruation had taken place ; old women, in whom the course had ceased at the ordinary period, have had them re-appear at the age of sixty or seventy, and they have become mothers ; lastly,

women in whom menstruation has never been observed, have nevertheless become pregnant." I cannot testify to the truth of any of these remarks of Magendie; and I opine there are not many who can.

But although the use of the menstrual secretion seems to be, to prepare for conception, it is not by any means to be inferred that "amitiveness" ceases at the "turn of life," that is, when the woman ceases to menstruate.

SECTION 3. *The Physiology of Generation.*—The process of generation in the different classes of animals is carried on in three if not four different ways. The first is that which occurs in the higher orders of animals, where the sexual congress of two individuals is essential to the production of the foetus. The second is where the co-operation of the two sexes is necessary, but where both sexes exist in the same individual. The third is with those animals where nothing resembling sexual organs can be detected; but where we merely observe the foetus to be detached from the body of the parent; while in other cases the body of the parent itself is divided into two or more portions, each portion, after the separation, acquiring those parts which are necessary for its perfect existence. It is to the first of these modes that I shall now confine my attention.

The nature and origin of the first rudiments of the foetus is a question that has given rise to much

speculation. Many eminent naturalists, both ancient and modern, have held that such rudiments consist of particles of matter derived from each of the parents. Leeuwenhoek supposed that the seminal animalecules are the proper rudiments of the fetus; and that the office of the female is to afford them a suitable receptacle, where they may be supported and nourished, until they are able to exist by the exercise of their own functions. A third hypothesis is that of pre-existing germs. It supposes that the fetus exists in the female, previously to sexual congress, and receives no proper addition from the male: the male fluid only serving to excite those actions which are necessary for its developement.

According to this hypothesis, the ovaria of Mrs. Adam must have contained a number of homuncules, [little human beings] one within another, like nested boxes, equal to all the human births that ever have been and will be—to say nothing of abortions! But I will not discuss the merits of this third hypothesis, nor the merits of the first. It is all matter of conjecture; and I choose to occupy my limited space in offering what I conclude, on the whole, to be the most probable and rational view of the subject.

I conjecture, with Leeuwenhoek, that the seminal animalecules are the proper rudiments of the fetus, and are, perhaps, of different sexes; that in case of impregnation one of them is carried not simply to, but into a vesicle of an ovary, which

vesicle is in a condition to receive, and be duly affected by it. It is here surrounded by the albuminous fluid which the vesicle contains. This fluid being somewhat changed in its qualities by its new comer, stimulates the minute vessels of the parts by which it is surrounded, and thus causes more of this fluid to be formed—enlarging the vesicle and nourishing the animalcule; at the same time the absorbent vessels of the ovary being aroused they remove such superficial part of the ovary as has retained the vesicle, and thus the vesicle is set free. Containing the animalcule in its centre, it now takes the name of ovum; and is received by the fimbriated extremity of the fallopian tube, which by this time has grasped the ovary; and is by this tube slowly conveyed into the uterus, to the inner surface of which it is attached, through the medium of a membrane which is formed by the uterus itself in the interim between impregnation and the arrival of the ovum.

As to the origin of the seminal animalcules, I believe they are daily formed in the male, (after the age of puberty,) and furnish us with one of the most incontestable instances of spontaneous generation.

A curious question connected with the function of generation, regards the circumstances which determine the future sex of the foetus. According to Hippocrates, the future sex is determined prin-

cially by the prevalence of the male or female semen, either as to the quantity of it which enters into its composition, or what he terms its strength. But the idea of "female semen," is probably erroneous. No doubt that in many constitutions the female orgasm increases, like that of the male, until an emission of fluid takes place; but this mucous fluid is probably nothing more than the result of exalted excitation, analogous to the increased secretion of other organs from increased stimulation, as the salivary glands from eating, &c.

Leeuwenhoek thought that the seminal animalcule are of different sexes, and determine the sex of the fetus.

Another opinion, which was current among the ancients, is that one sex arises from the right ovary, and the other from the left; and (favouring this doctrine) I know of some experienced and observing women who confidently believe that if they turn upon the right side immediately after intercourse, and so remain for some time, they will be very likely to bring forth a male child; but if they so turn upon the left side, a female. It would seem, however, that this notion is overthrown by a case that occurred to one Dr. Granville of a female, who had borne children of both sexes, and the ovary belonging to the left side was entirely wanting—as shown by dissection.

How is impregnation produced in the human

species?—It is universally agreed that sometime after a fruitful connection, a vesicle (two in case of twins) of one or the other ovary becomes so enlarged that it bursts forth from the ovary, and takes the name of *ovum*; which is taken up—or rather received as it bursts forth—by the fimbriated extremity of the fallopian tube, and is then slowly conducted along the tube into the uterus, to the inner surface of which it is attached. Here it becomes developed into a full *foetus*, and is brought forth in about forty weeks from the time of conception, by a process termed *parturition*. But as “nothing can act *where* it is not, any more than *when* it is not,” the question arises, in what way does the semen operate in causing the vesicle to enlarge, &c.? Does the semen itself or any part thereof reach the ovary, and if so, in what way is it conveyed to them?

It was long the opinion that the semen was ejected into the uterus in the act of coition; and that it afterwards by some unknown means finds its way into and along the fallopian tubes to the ovaria. But there are several facts which weigh heavily against this opinion, and some that entirely forbid it. In the first place, there are many well attested instances in which impregnation took place while the hymen remained entire, and in which this membrane was found uncommonly thick and strong at the commencement of labour; where the vagina terminated in the rectum; and

where it was so contracted by an old cicatrix that it could not have admitted the penis. In all these cases, the semen could not have been lodged anywhere near the mouth of the uterus, much less ejected into it. Secondly, it has followed a connection where, from some defect in the male organs, as the urethra terminating some inches behind the end of the penis, it is clear that the semen could not have been ejected into the uterus, nor lodged near its mouth. Third, the neck of the unimpregnated uterus is so narrow as merely to admit a probe, and is filled like the bean-like cavity of the uterus, with a thick tenacious fluid, which, seemingly, could not be forced away by any power which the male organs possess of ejecting the semen—even if the mouth of the urethra were in opposition with that of the uterus. But, fourth, the mouth of the uterus is by no means fixed; by various causes it is made to assume various positions; and probably the mouth of the urethra scarcely ever comes—and for any length of time remains—in contact with it.

Fifth.—“The tenacity of the semen,” says De-wees, “is such as renders its passage through the small aperture in the neck of the uterus impossible, even by a power or force much superior to that which we may rationally suppose to reside in the male organs of generation.” More than this, it is very difficult to conceive, nor does any one pretend to know, how the semen—admitting it to

have found its way into the cavity of the uterus—can reach and pass into the minute orifices of the fallopian tubes, at the top of this cavity, and then be passed along these tubes to the ovaria. It may be imagined that the fimbriated extremities of the fallopian tubes grasp the ovaria at the time or very soon after coition, but there is no proof that they do so, until *after* the ovaria have been influenced by the semen.

Sixth.—“Harvey and De Graaf dissected animals at almost every period after coition,” says the last quoted author, “for the express purpose of discovering the semen, but were never able to detect the smallest vestige of it in the uterus, in any one instance.”

Seventh.—Dr. Haighton divided the fallopian tubes of living rabbits in numerous instances, and found that after this operation a *fœtus* is never produced, but that *carpœra lutea* were formed. The obvious conclusions from these facts are, that the semen does not traverse the fallopian tubes; yet that the ovum becomes impregnated while in the ovary, and consequently that the semen reaches this organ in some other way.

Eighth.—A female conceiving while she is already pregnant constitutes *superfœtation*. Such cases disprove this hypothesis; for even the abettors of it are so sensible that the semen cannot enter and traverse the impregnated uterus, that they *deny* the occurrence of *superfœtation*. Facts,

however, are not to be overthrown by hypothesis, but the reverse. Cases of well established superfœtation are so numerous that we cease to note them in our reading. As it relates to my method of preventing conception, it is of more consequence to prove that the semen does not enter the uterus, than it is to refute any other opinion of the manner in which the semen reaches or influences the ovaria ; therefore I will here introduce two cases which can scarcely fail to convince the reader of the reality of superfœtation. The first is given by Dr. Dewees, the celebrated late Professor of Midwifery in the first medical school in the United States, in his "Essays on Various Subjects."

"A white woman," says he, "servant to Mr. H., of Abington township, Montgomery county, was delivered about five-and-twenty years since of twins, one of which was perfectly white; the other perfectly black. When I resided in that neighbourhood I was in the habit of seeing them almost daily, and also had frequent conversations with Mrs. H. respecting them. She was present at their birth, so that no possible deception could have been practised respecting them. The white girl is delicate, fair skinned, light hair, and blue eyed, and is said very much to resemble the mother. The other has all the characteristic marks of the African; short of stature, flat, broad nosed, thick lipped, woolly headed, flat footed, and pro-

jecting heels ; she is said to resemble a negro they had on the farm, but with whom the woman never would acknowledge an intimacy ; but of this there was no doubt, as both he and the white man with whom her connexion was detected, ran from the neighbourhood as soon as it was known the girl was with child." In connection with this, Dr. Dewees gives from his own practice another case, which leads him to conclude, as it must other medical men, that a second conception took place about five months after a first.

The second case may be found in the "*American Journal of the Medical Sciences*," taken from a *Dublin Journal* ; and is as follows :—"A married woman, aged twenty-two, was delivered January 25th, 1832, in the lying-in-hospital, at Berlin, of twins. The children were both girls. One was white, the other evidently a half caste, as indicated by the shape of its head, and by the colour of its face, hands, and feet. Their birth took place before the end of the seventh month, and they died two hours after their birth. On inquiry, it appeared that she was in habits of intimacy with a negro ; shortly after or at the time she had conceived by her husband."

In favour of the hypothesis now before us, and in opposition to the preceding facts and reasonings, it has been contended that the semen has actually been seen in the uterus and fallopian tubes. Ruyesch, an anatomist of considerable eminence

who flourished at the close of the seventeenth century, asserts in the most unequivocal manner, that he found the semen in its gross white state in one of the fallopian tubes of a woman, who died very soon after, or during the act of coition, but, as Dewees well says, "the semen, after it has escaped from the penis, very quickly loses its albuminous appearance, and becomes as thin and transparent as water; and we are certain that Ruysch was mistaken. Some alteration in the natural secretion of the parts was mistaken for semen; this was nowise difficult for him to do, as he had a particular theory to support—and more especially as this supposed discovery made so much for it. It is not merely speculative, when we say that some change in the natural secretion of the parts may be mistaken for semen, for we have the testimony of Morgagni on our side. He tell us he has seen similar appearances in several instances in virgins and others, who had been subject in their lives to leucorrhœa, and that it has been mistaken by some for male semen.

A second hypothesis is, that the semen is absorbed from the vagina, into the general circulating system, where it is mixed with the blood, and goes the whole round of the circulation, some of it being carried to the head, hands, and all other parts of the body, and all of it subject to the influence of those causes which certainly produce great changes in the blood itself.

To this hypothesis it has been objected that while there is no direct evidence in support of it, it is exceedingly unreasonable, inasmuch as we can scarcely believe that the semen can go the whole round of the circulation and then find its way to the ovary in such a pure unaltered state as the experiments of Spallanzani are supposed to prove it must be in, that it may impregnate. I shall have occasion to consider these objections hereafter.

A third set of theorists have maintained that only an imperceptible something which they call *aura seminalis* passes from the semen lodged in the vagina, to the ovary, and there excites those actions which are essential to the development of an ovum—a something so volatile, I suppose, that it needs no vessels in which to pass, but may go cross-ways, through all kinds of textures. Others, again, have told us that it is all done by *sympathy*: that neither the semen nor any volatile part of it, finds its way to the ovary; but that it excites the parts with which it is in contact in a peculiar manner, and by a law of the animal economy termed *sympathy* or *consent of parts*, a peculiar action commences in the ovary, by which an ovum is developed, &c.

To both these last conjectures, it may be objected, that they have no foundation but the supposed necessity of adopting them, to account for the effect of impregnation; and further, they make

no provision for the formation of mules; for the propagation of peculiarities, likenesses, and predispositions to diseases, from fathers to their children; for the production of mulattoes, &c.

A fifth view of the subject is that of our distinguished countryman, Dr. Dewees, of Philadelphia. He believes that there is a particular set of vessels, which he calls seminal absorbents, leading from the inner surface of the labia externa and from the vagina, directly to the ovaria, the sole office of which is, to absorb the semen and convey it to the ovaria, without suffering it to enter the general circulation. He says the existence of these vessels is now rendered almost certain, as Dr. Gartner, of Copenhagen, has discovered a duct leading from the ovary to the vagina.

This modification of the *theory of absorption*, so well harmonized with all facts relating to conception, that were known to me when I wrote *Fruits of Philosophy*, that I had but little if any doubt of its correctness. I still adhere to the theory of absorption; but I somewhat question whether the semen do not enter the general circulation, or, if it do not, whether it may not be taken up by absorbent vessels in other parts of the body than the mucous surface of the labia and vagina, and conveyed to the ovaria. As grounds for thus questioning, I give in the first place the following article from the *American Journal of the Medical Sciences*, No. xxxvi. p. 475.

"*Is conception possible without coition?*" Under this title, Dr. Casper, editor of the *Woohenschrift sur die gesammte Heilkunde*, has published in his journal a memoir taken from the manuscripts of Professor HEIM, comprising seven cases which have for their object to establish an affirmative answer to the foregoing question. It is a problem, undoubtedly, of great importance, with respect not only to physiology, but also to legal medicine. Examples are incontestible of pregnancy while the hymen remains entire. The celebrated Heim, a man of great name and high authority in Germany, has even collected instances where conception took place, although the spermatic fluid [semen] was lodged only at the entrance, or before the orifice of the vagina. We may conceive this possible, if we admit that the fecundation of the ovum takes place from the emanation of the *aura seminalis*. [Or admit the theory of *absorption*.] But Heim goes still further, and allows the possibility of fecundation by the simple aspersion of the semen on the lower part of the abdomen [belly.] In support of this opinion, he cites four cases, which he met with in his own practice, and three others from the papers of M. Ribke, professor of midwifery; which cases, according to him, leave no doubt of the possibility of the fact which he advances. We will confess that the perusal of these cases has not left on our mind the same conviction which appears to animate the author. But could

this be otherwise? This conviction of the celebrated Heim, was it not in consequence of the reliance which he placed on the persons who were the subjects of his observations. It is a purely *moral* conviction which he has acquired, and which cannot be possessed by him who has not the same faith in the veracity of the persons whose cases Heim relates.

These facts are of no importance by themselves. They only obtain weight from the name of two celebrated men who have published them, and who still enjoy, among our German neighbours, unbounded credit and confidence. The last consideration alone has induced us to dwell on this delicate and long unresolved question; to which we call the attention of French accoucheurs and medical jurists.—*Gazette Medicale de Paris*, 26 Sep., 1836."

Hasty conclusions from a limited number of facts have done more to retard the progress of science than incredulity; and the above expressed scepticism of the French editor, if taken as probably meant, is commendable. The practice, however, of withholding our assent, or even denying well authenticated facts, because we cannot account for them, may be carried to an unjust extreme. If facts are of "no importance," until enough are accumulated to establish a principle, then I admit that the above are so; yet the publication of them may lead to important results.

They struck me very forcibly, because I have been assured by several persons that they had been the cause of pregnancy, they knew not how ; as they meant to, and thought they did practice withdrawal completely and invariably. Such relations I only regarded as probable evidence of absorption from parts anterior to the vagina, and of the trifling amount of semen required to produce effect. So I can give neither names nor numbers ; but I have an impression that four or five such statements have been made to me in an equal number of years.

Since writing the above, a very striking case in favour of impregnation by absorption from the surfaces of the abdomen, has come to my knowledge ; and as this question is of vast importance I must give the case somewhat in detail. And although I cannot give the name of the subject of this case, still I do hope the reader will give more credit to my statements—as I give him my *real* name and place of residence in the fore part of this book—than what is due to many stories recently published in several catch-penny works, purporting to be translated from some foreign language, or written in English by some M. D., “ Member of the London Royal College of Surgeons,” &c., of a foreign country.

A few months since, while attending on a lady in her accouchment, I fell into conversation with the female attendants respecting checks to concep-

tion; and one of them remarked, that she did not believe there was any way to prevent it—that if a woman suffered a man to come near her, she was liable to conceive. Knowing this lady to be a sensible, well informed woman, and the mother of five children, her remark somewhat surprised me—for she evidently spoke in seriousness. I pondered over it for some time. At length it occurred to me, that she supposed herself to have been impregnated under the practice of the drawback. Being desirous to ascertain this fact, I took out my pencil and wrote upon a piece of paper as follows:—“Some of the most eminent German physicians believe that a female may conceive, when the sperm is only lodged upon the belly. Is there anything in your experience that goes to confirm this idea?” On reading it, she exclaimed, “It is true, I know it is so. I *know* that in every one of my children, nothing was left any where in the natural place, and it has always been a great mystery with me, how I should ever have any.” I had more conversation with the lady, but the reader must be content with what is already given. I was well acquainted with her. She is altogether respectable, and there could be no inducement for her to deceive me. In short, I am sure that this woman is entirely satisfied that all her pregnancies took place by way of absorption from the abdominal integuments.

Within a very few years certain fundamental facts

in relation to the action of organic tissues, and the penetration of liquids and gasses through them, have been discovered, which shed much light on some of the most important mysteries of physiology. To give the common reader any adequate idea of these facts would require quite too much space; but medical men who have watched the progress of their science will readily conceive that I allude to the discoveries of H. M. Dutrochet, Dr. J. K. Mitchell, professor Graham, of Glasgow, and particularly to the experiments of Dr. R. E. Rogers, related in the *American Journal of Medical Sciences*, for August, 1836. These experiments show that the structure or tissue, which is interposed between different liquids and gases, is not passive during the passage of these substances through it; but exercises a kind of elective influence. And they have led me to conjecture—not simply the well known fact, that from some cause or other certain substances act upon certain parts of the animal system in preference to other parts, as cantharides upon the urinary organs, mercury upon the liver and salivary glands, &c.,—but that different organs have *affinities* for different substances, so that some substances will find their way to some organs in preference to other organs. Consider, then, the inosculating and web-like arrangement of the innumerable absorbent vessels all over the system, and say, ye learned physiologists of the present day, if it be so very incon-

ceivable, that semen may be absorbed from the skin of the abdomen, and find its way to the ovaries without entering the general circulation. But supposing it do enter the general circulation, is there any proof that its doing so would destroy its fecundating property? May not the means be necessary to the end? that is, if it undergo any change, may not this change be necessary to complete its fecundating property, instead of destroying it? Dr. Dewees says *no*, and gives as his reason, that in Spallanzani's experiments unaltered semen was necessary. But these experiments must have been, and were, performed on such animal's ova as are always impregnated after they have left the body of the female. Here the process of generation is quite different than in the human species; and here the male furnishes semen requiring no change, which *may* not be the case with man. But it is not certain that the semen would soon undergo any essential change if it should enter the general circulation. Who believes that cantharides, by doing so, lose the property by which they stimulate the skin before they reach the urinary organs; or that spirits of turpentine, alcohol, &c., soon lose their peculiar properties after entering the general circulation. Dr. Dewees does as much as to say, that the peculiarity of the semen would be immediately lost, if taken up by any absorbents—*but his!*

On the whole, I would say, that in some, few

cases, when the mouth of the uterus is uncommonly relaxed and open, a little semen may chance to get into it, but then it is probably lost, as to the matter of conception; for it is not consistent with analogy to suppose that the uterus has vessels particularly for absorbing the semen and conveying it to the ovaria, considering the other important functions which we know it performs. I believe in the doctrine of absorption. I believe that this absorption takes place from the vagina, and from parts anterior to it; and that the drawback, without more than usual precaution, is *not* sure. I scarcely believe the semen enters the general circulation; nor is it of any *practical* importance whether it do or do not. So too with respect to the idea of *sympathy*, and the *aura Seminalis*, my plan of preventing conception will meet either of them. For, after all, it is the peculiar—fecundating property of the semen that causes conception, and the means and facility of destroying this property do not depend on the manner of its operation.

CHAPTER III.

OF PREVENTING CONCEPTION WITHOUT SACRIFICE OF
ENJOYMENT.

SEVERAL ways and means have been proposed and published, by men not of the medical professions, for preventing conception. But, all things considered, I do know that not one of them can bear any comparison with the means I am about to propose ; therefore I shall not be at the trouble even to mention them.

My method operates in a two fold manner, either of which might, perhaps, be effectual. It consists in syringing the vagina, soon after the male emission into it, with some liquid, which will not merely dislodge nearly all the semen, as simple water would do—the female being in the most proper position for the operation—but which will destroy the fecundating property of any portion of semen that may remain.

Various kinds of liquids may be used for this purpose, and some may be preferable to others, in certain cases, according to the state of the parts as to sensibility, disease, &c. If much relaxed, with-

out being in a sore or tender state, a solution of alum would be good ; and infusions of almost any astringent vegetables, as white oak bark, hemlock bark, red rose leaves, green tea, raspberry leaves or roots, &c., would answer ; but alum is the most convenient, and its solution does not undergo any change. If the woman be subject to leucorrhœa, or "whites" as it is commonly called, and there be not *much* tenderness, sulphate of zinc, called in commerce *white vitrol*, will make a very suitable solution. If there be relaxation and a weakening discharge existing together, as there frequently is, a combination of the zinc and alum would be the most suitable. There are two kinds of sulphate of zinc in market. The purist and best is crystalized, and very much resembles epsom salts. If there be tenderness about the parts, as is frequently the case, a solution of sugar of lead may be used. It is frequently used in this way, as a medicine, in such cases. Perhaps, as a general thing, a solution of sal eratus is the best and most convenient thing to use. It leaves the parts in a smooth agreeable state, whereas, for an *hour* or so after zinc or alum have been used, there is a roughness about the parts which would not be agreeable to the male on a second copulation. As a *general* thing, this roughness is no objection to the zinc or alum, as the natural secretion of the vagina always soon removes that state which communicates the feeling of roughness to the male.

I fully believe that the fecundating property of the semen depends on the seminal animalcules, as it seems to be admitted on all hands, that these animalcules "cannot be detected in the semen when from age or disease the animals are rendered sterile." But whether it depends on these animalcules or not, the semen certainly does possess a fecundating property, and it seems to me more than probable, that this property may be easily destroyed by any liquid, which by its chemical or other properties, can produce any considerable change in the semen, when brought in contact with it. This opinion is now rendered so far certain by *experience* that I cannot say I have a single doubt of its truth. And yet I am, and ever have been fully aware of the difficulty of proving this matter by experience, and of the caution that ought to be exercised against drawing conclusions from a too limited number of facts or cases.

I am quite confident that a liberal use of pretty cold water would be a never failing preventative. If rightly applied; (and I shall soon speak of the best mode of operating,) it would wash away nearly all the semen, and it does appear to me that the chill of it would quite destroy the fecundating property of every particle that might remain lodged among the folds and ridges.

As to the strength of any of the solutions I have mentioned, I can do no better than to say,

let each individual use them as strong as she finds she can, without producing any disagreeable sensation. If the sensibility of the parts was the same in all, and every one had small scales and weights, and exact measures on hand, which is very far from being the case, I could easily give exact formula for making all the solutions. Should either of the solutions be a good deal too strong, no harm will result from one trial of them, except unpleasant feeling of short duration. Yet beginners will desire some directions for making a first trial, accordingly I here give what I think about right for the generality of females.

1. Of Alum, to a pint of water, a lump as large as a large chesnut.
2. Of Sulphate of Zinc, to a pint of water, a large thimble full.
3. Of Sal Eratus, to a pint of water, two common sized *even* teaspoons full.
4. Of good Vinegar, to a pint of water, four or five greatspoons full.
5. Liquid Chloride of Soda, to a pint of water, four or five greatspoons full.

A *female syringe*, which is a simple and cheap instrument, will be required, and one can be obtained in any apothecary's shop. Arrangements are in contemplation for furnishing them, with other facilities, in connexion with this book, and better ones too than are generally made. Many of them are too short, and none that I have seen, are

made so strong, and of as good materials as is desirable. They are too easily bruised, which renders them unfit for use.

I wish the following directions to be particularly attended to. Let the quantity of tow on the piston of the syringe be such that it will draw well, and yet move tolerably easy. If there be any little accidental hole in the body of the syringe, as there sometimes is, it must be closed by touching it with a hot iron. Having put the end of the syringe into the liquid, and filled it by drawing up the piston, with the thumb and middle finger hold of the body of the syringe, and the forefinger in the ring of the piston, let the syringe be deeply introduced into the vagina, and then push home the piston with the forefinger, and with tolerable force. The woman being in the right position (and this, common sense cannot fail to dictate) the fluid, together with most of the semen, will pass out of the vagina into the vessel, as the syringe is withdrawn. Be not sparing of the liquid, but repeat this operation two or three times. It will be found to be very simple, and very easy, requiring but a minute's time, and no light, if the liquid be at hand. Do not delay the operation over five minutes, nor so long, if there be no reason for doing so. Yet if peculiar circumstances should compel you to delay half an hour, it would still be worth while to use the injection; for we do not certainly know how soon the absorbent

vessels begin to take up the semen, nor do we know but that they would take up some of the injected liquid, which would thus follow after the absorbed semen, and prevent its peculiar operation on the ovary or vesicles of the ovary. Resort to the means *invariably*, except in case of existing pregnancy, recent delivery, or a decidedly diseased state of the menstruation. Because a menstrual period is near at hand, or because the female experiences no pleasure, it will not be safe to omit. No doubt a very small quantity of semen lodged any where within the vagina or within the vulva, may cause conception, if it should escape the influence of cold, or some chemical agent.

The chloride of soda is a very cleansing, healing, and unirritating application, and I have no doubt it would be a very good article to use as a "check;" yet I have no experience of its use for this purpose. I believe it is much used in cities as a cosmetic, but its expense, and the present difficulty of obtaining it in the country is an objection against its general use. Vinegar has not been used, but I have mentioned it, knowing it is handy and would be harmless, and fully believing it would be quite effectual. Alum and zinc do in some degree coagulate the semen, while sal eratus renders it soon liquid, like water. The two former, and especially the zinc, have been far the most tried, within my knowledge, but I have considerable more than a theoretical confidence in the

sal eratus. And old fashioned pearlash, and sal soda, so much used of late in washing cloths, are very much like sal eratus, and doubtless would answer as well, in little less quantities. If, under any circumstances, it is desirable to prevent any of these solutions from freezing by the addition of spirits, it may be safely done.

The use of the syringe check requires the woman to leave the bed ; but this is an objection of trifling weight, compared with the pleasure it enables us to enjoy, or with the anxieties and other troubles that must or may arise from not using it. It is in a *cold room* that this objection can have scarcely any weight, and it would require no great ingenuity so to construct and arrange things, that one's sleeping room need not be cold in the evening certainly, if not in the morning. In favour of this check, it may be said, that it is *sure*, that it *costs nearly nothing* ; that it *requires no sacrifice of enjoyment* ; that it is in the hands of the female, where for good reasons it ought to be ; it is *harmless* ; it is conducive to *cleanliness*, and tends to preserve the parts from *relaxation* and *disease*, to which they are very subject ; and its use does not prevent conception at any future period, whenever desired.

I have said it is *harmless* ; that is, it is as much or even more so than *celibacy*. That pregnancy may be *advantageous* to a very few *unhealthy women*, will be readily admitted ; but the question

is, will healthy women be more likely to retain their health, if they bear children occasionally, than if they do not? At first thought, it is very *natural* to suppose that they will. But I think it a disputable question. Is the mare and other domestic animals which are permitted to breed, any more healthy than those which are not? I can easily conceive that in the case of an ardent married woman, whose "amitiveness" is nearly or wholly suspended during pregnancy, this state may be of advantage to her; but it would not be correct to ascribe to voluntary barrenness, the nervousness, stomach complaints, debility, &c., which arise from *intemperance*.

It was in the year 1831, that the subject of checks to conception was first suggested to me, by the perusal of a work entitled *Moral Physiology* and written by Robert Dale Owen, the late almost successful candidate for congress in Indiana. I was strongly impressed with the incalculable advantages that some *good* check would confer upon mankind, but I was altogether dissatisfied, disappointed, and even mortified, to find that no such check had been discovered. I could not learn that any medical man had ever directed his attention to the subject, and I was resolved to do so myself; and this I did with a kind of presentiment, that I should hit upon something better than had yet been discovered; yet I had not the least conception of what it would be. My first step was to examine the various theories

of conception, with a view to decide the real process by which impregnation is effected. Having satisfied myself as to this point, my object now was to discover some sure, cheap, convenient, and harmless method, which should not in any way interfere with enjoyment. Strange as it now seems to me, and must seem to others, I spent days and nights in close reflection on this point, before I arrived at my present mature idea. A first thought that glanced through my mind, was to wash out the semen with the syringe; but then it occurred to me, that this would not answer, because almost certainly there would be a trifle of semen lodged among the folds and ridges of the vagina that would not be washed away, and this trifle would be enough to cause conception. So this idea was dismissed; but it at length occurred to me, to add something to the water that should not hurt the woman, but yet kill the little tender animacules, or in other words, destroy the fecundating property of the semen, whether it be or be not dependent on these animalcules. I now had all the confidence that theory alone could ever give a man, and I sat down and wrote the first edition of this work, intending to put it to press immediately. But by the time it was written, I began to consider that I did not positively *know* that my plan would never fail, and to reflect on the great amount of evil that I might be instrumental in producing, if by publishing, I should excite a confidence in my readers which my plan does not

merit. So I laid aside my manuscript. But about four months afterward, while relating my views to an old acquaintance, who had seen much of the world, and was withall a curious kind of a genius, he agreeably surprised me, by assuring me that my plan would 'carry,' as he well knew from ten years experience in his own family. And from the particulars which he communicated to me, I was fully satisfied that in his family it had succeeded; and of course it possessed the power of succeeding in others. He, i.e., his wife, used simple water, and from his accounts of her health, former habits, &c., no physician could entertain much doubt, that for about four years water alone was successful; and if it were so, then its failure must be attributed to an inefficient application of it. After its failure he added something to it, and I think it was sugar of lead. On receiving this information, I no longer hesitated to put my manuscript to press. Since that period my own individual experience, together with information more or less directly received from others—and being a practicing physician, enjoying a full share of the confidence of those around me, my opportunity for acquiring information has not been small—have been such, that I think I should have full confidence in the plan, even if I were wholly ignorant of physiology.

Any publication, great or small, mentioning the syringe (or anything else that operates upon the same principle) as a means of preventing concep-

tion—whatever liquid may be recommended—is a violation of my copyright. It is this syringe check, together with the idea of destroying the fecundating property of the semen while in the vagina, that in my estimation gives this work its peculiar value. A great part of the work is written with a view to elucidate the subject of generation so as to give common people confidence in this check. I never should have written any such book as this, but for my discovery of this plan. I have devoted much time and thought to the leading subject of this work. I have done so under a strong conviction that I was rendering a signal service to frail and suffering humanity; and if the result of my labours be worth anything, it is my property; but if worthless, no one ought to sell it for a price, even if it were not secured to me.

CHAPTER IV.

SECTION I.—OF THE SIGNS OF PREGNANCY.

DR. DEWEES remarks that, "our experience furnishes no certain mark, by which the moment conception takes place is to be distinguished. All appeals by the woman, to particular sensations experienced at the instant, should be very guardedly received; for we are certain they cannot be

relied upon; for enjoyment and indifference are alike fallacious. Nor are certain nervous tremblings, nausea, palpitation of the heart, the sensation of something flowing from them during coition, &c., more to be relied upon." Burns, however, says, "some women feel immediately after conception, a peculiar sensation which apprises them of their situation; but such instances are rare, and generally the first circumstances which lead a woman to suppose herself pregnant, are the suppression of the menses, and an irritable or dyspeptic state of the stomach." Such state of the stomach is indicated by a sickle appetite, some sickness, perhaps vomiting in the morning; returning qualms, or fits of languor in the afternoon, heartburn, and disturbed sleep. The mind sometimes becomes irritable, sometimes melancholy. The breasts at first often become smaller; but about the second or third month they enlarge, and occasionally become tender and painful. The nipples are surrounded with an areola or circle of a deeper chestnut colour than before. The woman loses her looks, becomes paler, and the under part of the lower eyelid is often somewhat of a leaden hue. The features become sharper, and sometimes the whole body begins to emaciate, while the pulse quickens. In many instances salivation, toothache, and jaundice are caused. In others, very little disturbance is produced, and the woman is not certain of her condition until the time of

*quicken*ing, which is generally about four months from the time of conception. It is possible for women to mistake the effects of wind for the motion of a *fœtus*, especially if they have never borne children, and are anxious for a family, but the sensations produced by wind in the bowels, are not so much confined to one spot, but are often felt in parts of the abdomen where the motion of a *fœtus* could not possibly be felt. Quite as frequently, perhaps, do fleshy women think themselves dropsical, and mistake *fœtal* motions for movements of water within the abdominal cavity.

After the uterus has become so enlarged that it has arisen out of the pelvis into the abdominal cavity, it may be felt with the hands through the walls of the abdomen like a ball—not a very hard one, to be sure, but sufficiently so to be readily distinguished in most cases; especially if the abdominal muscles be relaxed, the woman not very fleshy, and tolerable pressure be made with the hands. Morning sickness and other sympathetic effects of pregnancy now abate, and the health improves.

There are other signs by which a physician is assisted in determining the existence of pregnancy; but it would be of no practical use to common readers to mention them. Most of those I have mentioned may be deceptive, and it is their existing together that gives them weight. Suppression of the menses may arise from cold and

other causes; and so may the stomach and nervous affections. Perhaps in the early stages no one symptom is more to be relied upon, than a distinctly increased colour of the circle around the nipple. After quickening, the tumour in the middle and lower part of the abdomen is almost infallible.

SECTION 2. *Of the Term of Utero-Gestation.*—The length of time from conception to the commencement of labour, in the human species, is not precisely determined by physiologists. "It seems, however," says Dewees, "from the best calculations that can be made, that nine calender months, or forty weeks, approaches the truth so nearly, that we can scarcely need desire more accuracy, could it be obtained." Unquestionably, however, some cases exceed this period many days, or even weeks; and it is a question which has been much agitated, how far this period is ever exceeded. It is a question of some moment in a legal point of view; and the knowledge and use of *checks* may greatly assist in deciding it. Cases are reported where the usual period was exceeded by five or six months; cases, too, where the circumstances attending them, and the respectability of their reporters are such as to command our belief.

Dr. Dewees has paid much attention to this subject, and he declares himself entirely convinced, "that the commonly fixed period may be extend-

ed from thirteen days to six weeks, under the influence of certain causes or peculiarities of the constitution." And he expresses himself "severely disappointed" that Dr. Beck, an accredited writer of this country on Medical Jurisprudence, should treat the idea of extended gestation with so much scepticism and levity as he has done; and this too, without adducing any opposing facts, or employing any apposite reasoning.

The occasional departures from the general rule will be the more readily admitted when we consider that they are not confined to the human species. Thus, from the experiments of Tessier it appears that:—

"In 575 cows, 21 calved between the two hundred and *fortieth* and two hundred and *seventieth* days, average two hundred and fifty-nine; 544 between the two hundred and seventieth and two hundred and ninety-nine days, average two hundred and eighty-two; and 10 between the two hundred and ninety-ninth and three hundred and twenty-first days, average three hundred and six days; average on the whole, 282 days; so that, from the shortest to the longest period, there is a difference of eighty-one days, that is, more than one fourth of the average time."

Similar variations were observed in mares. In 277 with foal for the first time, the average term of the whole was three hundred and forty-seven days, and the difference between the extremes, one hundred and thirty-two days.

In 170 mares which had foaled before, the average of the whole was three hundred and forty-one days, and the difference between the shortest and longest periods was ninety-seven days.

"In 212 sheep, the mean time of gestation was about one hundred and fifty-one days, and the extreme difference, only eleven days."

"In 25 swine, the extremes were from one hundred and nine to one hundred and thirty-three days."

"In 161 rabbits, the extreme terms were from twenty-seven to thirty-five days."

SECTION 3. Of the Nature or Life of the Fatus: Has it any Rights?—It was the practice with men in former ages, whenever they could not explain certain phenomena of nature, to cut the Gordian-knot, by ascribing them to unknown agencies, which they imagined to exist, and to which they gave names. By such procedure, many thingless names were brought into use, which have been great stumbling-blocks in the way to truth. These names were used as if they were the names of real existences—as must needs be, if used at all—and being continued in use, for convenience's sake, they have greatly served to deceive mankind, and to maintain a belief in the reality of the imaginary things they were first used to designate. Of this description of names is the word *Life*.

The two grand classes of organized beings,

vegetables and animals, possess certain organic properties or powers to which the organic union of their component parts, has given rise ; by virtue of which properties they exhibit many phenomena peculiar to themselves—that is, not exhibited by inorganic bodies. It is because they do exhibit these phenomena that they are said to be alive, or to possess life ; and when their nice, internal organization, is so impaired that they no longer exhibit these phenomena, they are said to be dead. *Life*, then, is a thingless name. There is no real being or agent in existence for it to signify ; and it is only out of respect to its use, and the use which the popular language of the day still compels us to make of it, that we consent to give it any definition at all. When applied to an individual, as a whole, it signifies the sum total of the organic properties of such individual ; when applied to a part of an individual, as a limb of a man or of a tree, it signifies all the organic properties of such part, and no more. We see then that different parts, as well as different animals and vegetables, possess different lives. In fact, the lives of no two differently organized beings are alike ; for difference of organization gives rise to difference of properties. And when the organization is daily changing, as in the *fetus*, the life is daily changing. The *fetus*, then, has life. But is it vegetable life, or is it animal ? Before we answer this question, we must point out that or-

ganic property which is essential to animal life and which distinguishes it from vegetable.

Is it self motion, that is, the power of moving on the application of a stimulus, and without the application of physical force? No; for some organized beings which all agree to call vegetables as the sensitive plant, and the *Hedysarum gyrae* of the East Indies, possess this property in a remarkable degree. It is *sensibility*, or that property by virtue of which a sensation may be excited. It is not voluntary motion, (which differs from self-motion, as above defined,) for although most sentient beings—most animals—possess this power, yet some, I believe, do not possess it; and further, contractions of voluntary muscles (not voluntary motions) may and do take place after all would say that *animal* life is extinct. Who has not heard of the astonishing motions excited in "*dead*" men by galvanism?

The life of the foetus, then, is vegetable, until its nervous system has become so far completed as to give rise to the property of *sensibility*, after which it is animal. But it is doubtless a low degree of animal life until near its birth; and even immediately before this event—although it may be said to possess the power of seeing, tasting and perhaps hearing and smelling, as well as feeling; yet none of these powers, except feeling, have been called into action; and feeling but very slightly. It has acquired no ideas, or certainly not enough to

constitute a *personal identity*. It is as much a part of the female to which it is vitally attached, and can with no more propriety be said to possess any *rights*, than any one of her extremities, or than a sensible tumor, as a wen, upon the outer surface of her body. We are apt to take a different view of it, because we associate with it an idea of what it will be according to the ordinary course of nature. But I am speaking of it as it *is*, while it is a *foetus*, and not of what it will be after it has undergone important changes. The earth under our feet will yet undergo such changes as to become men, but who will say it has rights on this account?

Consciousness and muscular motion are two distinct things, though often existing together, even as cause and effect. The motions of decapitated animals are entirely independent of consciousness; notwithstanding the absurd tales about guillotined heads turning themselves, (as if to notice surrounding objects) an act physically impossible for them to perform, though they were possessed of as much feeling and intelligence as before separated from their bodies; no part can be moved by muscles, unless these muscles are attached to some *other part*. The heart acts regularly and powerfully independent of consciousness. The motions of the *foetus in utero* are no proof of consciousness, and probably most of them are not voluntary. They mainly depend on the state of the

female's body and mind ; and are not performed by the fetus to avoid pain, or to obtain something which while floating in the waters, it either feels, sees, hears or smells. The laws in this country against abortion were never made by physiologists ; and I should hardly think by men of humane feelings.

SECTION 4. Of the Development of the Fetus.—Omitting all account of the changes produced in the uterus and its appendages by impregnation, and attempting no minute explanation of the manner in which the fetus is developed, which would be difficult to understand ; I shall briefly sketch the progress of its growth. A knowledge of this progress, I conceive, may be advantageous to many persons—especially to those who miscarry and yet think they have not done so, because they could not discover such appearances in the discharges as their want of this knowledge had led them to expect ; and consequently are not likely to be so cautious in a future *doubtful situation*, as they would be if they knew they had miscarried one or more times.

Many circumstances accelerate and others retard the growth of the embryo or fetus, as is the case with all organized bodies ; and we can only show what seems to be the most common progress of its development.

From dissections made under favourable circumstances for discovering the situation and con-

dition of the human ovum in a given time after conception: and also from analogical evidence, it appears that it does not reach the uterus until about four weeks from the time of impregnation. And it seems to be doubtful whether it contains any thing but a transparent fluid until sometime after this period. According to Dr. Beck, who has entered into a laborious investigation of the subject, the embryo is about the size of a barley corn in thirty days after "the first evidence of impregnation;" but what this evidence is, or at what time after successful intercourse it first makes its appearance, he saith not. Burns says, "I have examined carefully a most perfect ovum in the ninth week after menstruation, and consequently not less (probably) than the fifth after conception. In it no embryo could be detected—nothing but transparent fluid." From this author, mainly, I extract the following description:—

When the human fetus is first distinctly visible through the membrane, it is not above a line in length, and of an oblong figure. In the sixth week, it is seen slightly curved, resembling, as it floats in the water, a split pea. In the seventh week, it is equal in size to a small bee; and, by the conclusion of the second month, it is bent, and as long as a kidney bean. At first it appears like two oval bodies united by a neck. One of these is the head, the other the trunk. The head is a membranous bag, large in proportion to the body;

but after the first month of its distinct appearance, its relative size decreases: on opening it, nothing but a soft pulp is found within. In a little time, the face appears, the most prominent features of which are the eyes; these are proportionably larger in the embryo than in the advanced *fœtus*, and are placed low down. The face itself is small, compared to the cranium. The nose does not appear until the end of the second month; but somewhat sooner we may observe two apertures in the situation of the nostrils. The mouth at first is a round hole, but by degrees the lips appear; and after the third month they are closed, but do not cohere. The external ear is not formed at once, but in parts, and is not completed before the fifth month: even then it differs in shape from the ear after birth. It is at first like a gently depressed circle.

The extremities appear like the buds of a plant. The arms are directed obliquely forward, toward the face, and are larger than the inferior extremities. The genitals for a time are scarcely to be observed; but in a third month, they are large in proportion to the body.

When the embryo does not weigh more than scruple, the membranes are as large as a small egg. On the other hand, at the full time, when the *fœtus* weighs seven pounds, the placenta and membranes do not weigh a pound and a half, and the proportion of the *liquor amni* is greatly less.

sened. In the twelfth week the fetus weighs nearly two ounces, and measures, when stretched out, about three inches. The membranes are larger than a goose's egg, and weigh, if we include the liquor amnii, several ounces. In the fourth month, the fetus is about five inches long. In the fifth month it measures six or seven inches. In the sixth month the fetus is well formed, measures eight or nine inches, and weighs about one pound troy: whilst the placenta and membranes weigh about half a pound, exclusive of the liquor amnii. In the seventh month, it has gained about three inches in length, and it may live independent of the uterus, but its chance of surviving six hours after birth, is much against it. In the eight month, it measures about fifteen inches, and weighs four or five pounds. These calculations vary according to sex, and the conformation of parents. Male children generally weigh more than females; and their average length has been estimated at twenty inches and a third, and that of females at a trifle less than twenty inches.

CHAPTER V.

SECTION I.—REMARKS ON THE REPRODUCTIVE INSTINCT.

I SCARCELY need observe that by this instinct is meant the desire for sexual intercourse. Blumenbach speaks of it, as "superior to all others in universality and violence." Perhaps hunger is an exception. But surely, this instinct commands a great proportion of our thoughts; and has a great influence upon our happiness for better or for worse.

"Controlled by reason and chastened by good feelings as remarked by Owen in his Moral Physiology—"it gives to social intercourse much of its charms and zest; but directed by selfishness, or governed by force, it is prolific of misery and degredation. In itself, it appears the most social and least selfish of all our instincts. It fits us to give, even while receiving pleasure; and among cultivated beings, the former power is even more highly valued than the latter. Not one of our instincts, perhaps, affords larger scope for the exercise of disinterestedness, or fitter play for the best moral feelings of our race. Not one gives birth to relations more gentle, more hu-

manizing and endearing; not one lies more immediately at the root of the kindest charities and most generous impulses that honour and bless human nature. It is a much more noble, because less purely selfish instinct than hunger or thirst. It is an instinct that entwines itself around the warmest feelings and best affections of the heart."

But too frequently its strength, together with deficient moral culture, is such that it is not "controlled by reason;" and consequently from time immemorial it has been gratified, either in such a mischievous manner, to such an intemperate degree, or under such improper circumstances, as to give rise to an incalculable amount of misery. For this reason it has by some been regarded as a low, degrading, and "carnal" passion, with which a holy life must ever be at war. But in the instinct itself, the philosopher sees nothing deserving of degrading epithets; it is as much of a heavenly origin as any other part of the human constitution; and he sees not that nature should war against herself. He believes that among the unsophisticated natives of the forest it is, and in wisely organized societies of duly enlightened beings it might be, a source of tenfold more happiness than misery.

Physicians, of all others, ought to rise above selfishness—a difficult act, I grant—and having made themselves acquainted with human nature and all its frailties, they ought to strive—not to alter this

nature, for this they cannot do—but to diffuse among the people such information as shall enable them to avoid the evils which are liable to arise from gratifying those calls of nature which are inseparable from their existence. It is more useful and more noble to prevent than to cure; and people *ought* to regard those who do the former, as the greater benefactors.

In books, pamphlets, journals, &c., some benevolent physicians have already laid much useful information before the public respecting eating, drinking, bathing, lacing, contagion, air, exercise, &c., while the hypocrisy and prudery of the age have been such as to render it excusable in them to pass by the more important subject now before us.

This instinct is liable to be gratified at improper times; to an intemperate degree; and in a mischievous manner. This latter error I shall make the subject of the next section.

True philosophy dictates that this and all other appetites be so gratified as will most conduce to health and happiness—not merely the happiness attending the gratification of one, but all the senses—not merely sensual happiness, but intellectually; and, finally, not merely the happiness of the individual, but of the human family.

It ought not, either in males or females, to be gratified until the system is fully grown, and somewhat matured. Perhaps, as a general rule, in this country, it would be well, on this account, for

females not to marry before they are nineteen years of age ; and males not before they are two or three years older. Those who refrain until these ages, will enjoy firmer constitutions, generally speaking, and will ultimately be able to derive more pleasure from the gratification of this instinct than if they indulged earlier—especially to any considerable extent. I admit, nay, I verily believe that certain cases of disease, both in the male and female—but especially in the latter—form exceptions to this general rule.

A due regard to health and happiness also enjoins some restraint on this passion—indeed at all times—but especially for a few years after the above mentioned ages. It ought not to be rashly indulged at first ; as all great and sudden changes in our habits are detrimental to the *healthy* system ; as are all active medicines. Yet in some diseases, advantage may be taken of the influence of sudden changes.

Many young married people, ignorant of the consequences, have debilitated the whole system, the genital and nervous systems in particular ; have impaired their mental energies ; have induced consumptive, and other diseases ; have rendered themselves irritable, unsocial, and melancholy ; and finally, much impaired, if not destroyed their affections for each other, by an undue gratification of the reproductive instinct. In almost all diseases, if gratified at all, it should be very tem-

perately. It ought not to be gratified during menstruation; nor on the part of the female, soon after an accouchment or an abortion. In case of pregnancy a temperate indulgence for the first three or four months may be of no particular injury in those not disposed to miscarry. But it ought to be known that the growth of the *fetus in utero* may be impaired, and the seeds of future bodily infirmity and mental imbecility of the offspring may be sown by much indulgence during pregnancy; particularly where the woman experiences much sensation in such indulgence.

Having glanced at some of the bad effects of an undue as well as untimely gratification, I have but little more to offer under the head of *intemperate degree*.

It will be borne in mind that temperance or intemperance in this matter is not to be decided by *numbers*; but depends on circumstances. What would be temperance in one may be intemperance in another; and with respect to the same individual, what he might enjoy with impunity were he a muscular labourer, would, were he a student or mental labourer, unfit him for the successful prosecution of his business.

Sexual intemperance has a tendency to lead to intemperance in the use of ardent spirits. The languor, depression of spirits, in some instances faintness, and even want of appetite, induced by

the former, call loudly for some stimulus, and give a relish to spirits.

The male system is much more exhausted by sexual commerce than the female. It seems, indeed, to have but very little effect, comparatively, upon some females; but with respect to the male, it has been estimated by *Tissot*, that the loss of one ounce of semen is equal, in its effects upon the system, to the loss of 40 ounces of blood. As it respects the *immediate* effects, this estimation, possibly, may not be to great, generally speaking; but a man living on a full meat diet, might doubtless part with fifty ounces of semen in the course of a year, with far less detriment to the system, than with 2,000 ounces of blood.

It is a fact, that mode of living, independent of occupation, makes a great difference with respect to what the system will bear. A full meat diet, turtles, oysters, eggs, wine, &c., certainly promote the secretion of semen, and enable the system to bear its emission. But a cool, vegetable, and milk diet calms all the fiercer passions, the venereal especially. Persons of tolerable "amativeness," who adopt such a diet as this, and wait for the genital system to operate upon the mind, rather than seek occasions which operate on the mind, and, through the mind, on the genital system, will enjoy clear intellects and a fine flow of spirits.

SECTION 2. *Of Onanism, and Involuntary Seminal Emissions.*—By *Onanism* is now generally meant

self or solitary gratification, which, however, differs materially from the act of Onan, mentioned Gen. ch. xxxviii, ver. 9.

I believe it is the general opinion of enlightened physicians, that this practice is far more injurious to the system than gratification in the natural way. But it is not easy to give any very satisfactory reason why the same amount emitted in this way should be more injurious, than if emitted in sexual congress. *Probably* we are to look to the mind for the cause of its being so. We may well suppose that the thoughts which attend and follow gratification with females are of a more agreeable cast ; it is probable, too, that having enjoyed the *highest degree* of pleasure, the mind is more at ease and *satisfied*, and does not dwell so incessantly on one thing, as when only self gratification has been experienced. These suppositions being well founded, those who are aware of the great influence of the mind over the body, will think the fact of greater injury from solitary gratification sufficiently accounted for.

But probably those addicted to onanism, emit *more frequently* than others ; for many circumstances operate to hinder at least illegal intercourse, which have no control over the self-devoted debauchee ; and his thoughts being much engrossed with his passion, he frequently falls into the act.

But gratification in any way is injurious until the system becomes well developed, and in a mea-

sure matured ; and perhaps the mere knowledge of this fact will have as much controlling influence over young men, *and women too*, as if it were accompanied with the explanations which might be given.

To prevent any confusion of ideas, I will here remark that the voluntary gratification of the venereal instinct, in any manner, or to any extent whatever, is not itself a disease, but an *act* which may cause disease, and which may sometimes *be caused by disease*. That is, some morbid irritation in the system—perhaps in the genital organs themselves, or in the rectum, the bladder, the *brain*, or elsewhere, may give rise to such furious desires that no moral resolutions can withstand them, as those who make and administer laws ought to be aware. The *act* then, is not a disease ; nor does it, though commenced ever so early in life, or practiced ever so frequently, produce a particular set of symptoms in every case : that is, symptoms that do not attend other diseases, and are not produced by other causes. Of all the symptoms mentioned by Tissot, there is not one which may not arise from other causes than improper venereal indulgences.

I believe the practice of *Onanism* is quite prevalent and pernicious ; that its bad effects are by no means confined to those devoted to it, but extend to their progeny ; and that Tissot's treatise is well calculated to check it. But still I think

this treatise, and some others extant, on some accounts objectionable. It is in a great measure filled with a collection of desperate cases, and when a young man, ignorant of medicine, reads these cases, and the multitudes of symptoms which, amongst all the cases, he will meet with, he must be an uncommonly sound and healthy man, or he will believe that he has already done himself great, if not irreparable injury; and will suffer more in mind, and consequently in body, than if he had never seen the book, but had continued his practice. It is truly astonishing what a degree of mental disquietude will arise in a young man from the idea that his virile powers are injured, and this too by his own mal-practice; and equally astonishing, except to the enlightened physician, how this state of the mind will impair the bodily powers. In all the cases in Tissot's treatise, the mischief is attributed to Onanism, or to excess with women, without any intimation in any of the cases that the morbid symptoms might be owing to some disease, in the production of which the evil practice or excess had nothing to do: or any intimation that the excess itself might be owing to some disease over which the patient could have no control. A man marries a young wife and in three weeks becomes blind, and in four months dies; another is attacked the day after marriage with acute fever, and two others a week after; another has an epileptic fit, as he was in the

habit of doing before he married ; a young woman becomes chlorotic, &c., &c. ; and all these diseases are, by Bekkers and Tissot, attributed to venery as a matter of course. I do not believe that in any case more good than evil arises from erroneous views or false colouring. If a young man have a fever or a young woman become pale and weak soon after marriage, the world need not suppose it is necessarily owing to intemperance.

When we see a man have a voracious appetite for food or for nature's drink, [water,] we suppose that his stomach or some other part is diseased ; and this disease may have been caused by excesses in eating and drinking, *or it may not* ; so, too, an excessive venereal appetite may have been produced by other causes than excessive indulgence. And when a physician is called to a patient whose corporal and mental powers are much impaired, and he can discover no cause more probable than venereal excesses, he is still to inquire if these excesses have been such as would so reduce a *well* person ; and if they have he is still to inquire if there be not some morbid state of the system, or some local irritation, which is the *cause* and not the *effect* of such excesses.

Excess at a mature age is now and then productive of great infirmity in both sexes, but probably it is premature indulgence, and especially Onanism, that is doing the most and worst mischief. This practice in boys not only impairs

their growth, and weakens the mental and corporal powers ; but it attracts the vital fluids to the genital organs, giving rise to an habitually preternatural secretion of semen, and, finally, inducing that irritability and repletion of these organs which are the principle cause of involuntary nocturnal emissions of semen. This state of these organs causes the lascivious dreams, which, to be sure, are in most cases, the *immediate* cause of these emissions. I am inclined to the opinion that in most cases this state of these organs is induced by *premature* and unnatural indulgence, because, according to Blumenbach, no animal but man is subject to these involuntary emissions of semen.

I would say, then, that if a youth be given to the practice of masturbation or Onanism, he will be liable : First, to render the genital organs irritable, and produce in them a habit of secreting a superabundance of semen. Second, if all at once he become continent, procuring no voluntary emissions in any way, there will soon be repletion, giving rise to dreams and involuntary emissions.

Though I find it convenient in the arrangement of my ideas to consider involuntary emissions as constituting a disease ; still there are all degrees of difference as to their frequency, as well as to their effects upon the system ; and in many cases they ought to give rise to no uneasiness of mind whatever. Blumenbach, a very eminent physiologist, regards them as "among the natural excre-

tions, intended to liberate the system from the otherwise urgent and superfluous semen, more or less frequently, according to the variety of temperament and constitution. "I willingly grant," says he, "that barbarous nations of a phlegmatic temperament, and copulating promiscuously, do not require this excretion; but I must contend that it is a perfectly natural relief in a young man, single, sanguineous, full of juices, with a strong imagination, and living high, although enjoying the completest health in all other respects."

—*Institutes of Physiology*, p. 208.

In other cases, however, these emissions give rise to us deplorable effects us any voluntary excesses. They effeminate the system, making babies of men; they produce an effect upon the nervous system much like long continued grief, or other depressing passions, so that moral causes which would but little disturb a sound man, depress these patients very much, and not unsrequently cause them to weep. They reflect much on what they consider their miserable prospects of future happiness; and these sad reflections do the system immense injury. Let a young man once become possessed with the idea that his virility is impaired, and that sexual intercourse would greatly injure him, if not ultimately destroy; and, my word for it, his mind will wear down his machine faster than any degree of intemperance that is at all prevalent. Let him now have no adviser but

'Tissot's treatise, and he will certainly die ! Once on a time, before I studied medicine, I was most intimately acquainted with a young man who was subject to these emissions from the age of 17 to that of 21 ; he had them not oftener, on an average, than about once a week, and sometimes he would pass a month without any ; his appetite and digestion were good, and for the most part he slept well, nor did he part with *any* semen in any other way ; yet such was the state of his mind in relation to his complaint, that he all the while gradually lost strength, was considerably emaciated, and not a little *nervous*. The passage I have just quoted from Blumenbach would have done him more good than all the medicine, which he was for years continually pouring down, from no less than eight physicians, who at different times prescribed for him. For a short time he was so low that the emissions were not attended with erections, and with but very little agreeable sensation.

With some patients, the mere presence of females give rise to emissions ; with others, a little semen now and then passes off on going to stool. There are others, again, who are subject to a pellucid discharge from the urethra itself, without erection, but with venereal thoughts while awake. This, of course, is not semen, but a secretion of the urethra, owing, probably, to relaxation or debility. A diseased state of the urethra may give

rise to a *purulent* discharge, unattended with lascivious ideas, and *not* caused by an impure connection.

Tissot warns females against the practice of self-gratification, and says it produces in them as deplorable effects as in males ; " besides rendering them not unfrequently sterile, and even indifferent to the pleasures of the marriage bed."

As to the *medical* treatment of those who have injured themselves by premature, unnatural, or excessive venery, I shall say but little. In *some* cases of nocturnal emissions, the remedies hereafter mentioned for impotency would be proper. The common remedies for debility brought on by venereal excesses, whether attended by these emissions or not, are tincture of flies, bark, preparations of iron, cold bath, exercise, and employment that will, if possible, divert the mind, &c. Where the desires are so strong that the patient cannot refrain from *voluntary* emissions—constituting a disease called *Styriasis*—Opium, in large and repeated doses, is good ; as also spare vegetable diet, perhaps nitre, neutral salts, and other medicines supposed to be cooling, *close study* !

To prevent nocturnal emissions the male may derive some advantage by any contrivance his ingenuity can invent, which shall so confine the penis that erection cannot take place without producing an uneasiness which will awake him, in many instances, before the emission takes place.

I would suggest a bandage around the body just above the hips, opposite the centre of the back, attach the end of another bandage to the first, and bring it forward between the thighs; cut in it a small hole in the right place for passing through the penis, and then carry it up towards the navel, and fasten it to the first bandage. Passing the penis through the hole, turn it down towards the perincum, and there confine it with two or three pieces of tape, attached to the bandage on which the penis now lies. In *most* of these cases, stimulating, tonic, and astringent medicines are worse than useless. Remedies that allay irritation and remove the causes of it are the proper ones. Costiveness should be obviated by cooling apperients, such as epsom salts; and before going to bed, let the patient, by means of an India-rubber bag and pipe, inject into the rectum half a pint or more of tepid water, to unload the rectum before he retires, and also to allay irritation in that quarter. In some obstinate cases, cold water, or a very weak infusion of lobelia, as a teaspoonful of the powdered leaves, or a half a teaspoonful of the seed, to the half pint of water, may operate better than simple warm water. If neither succeed in lengthening the intervals between the emissions to a considerable extent; half a grain of opium dissolved in two ounces of water, or ten to fifteen drops of laudanum in two ounces of fresh oil or thin starch, may be injected after the tepid water injection has

passed off. If there be any disorder of the stomach or other digestive organs, it must by all means be attended to.

The patient should avoid stimulating foods and drinks, and late suppers. He should not drink freely of any liquids in the evening ; and should take care to empty the bladder, not only on going to bed, but whenever he awakes during the night. His bed should be hard and not over warm, and he should avoid lying on the back, as much as possible.

But for nocturnal emissions in youngerly persons, whose constitutions are not *all* broken down, the best remedy is marriage. It restored the young man whose case I have mentioned to health and strength in the course of a few months ; and he is now the father of several healthy children. He was induced to take this step by hearing that others like himself had been cured by this measure. Since I have been in the practice of medicine I have recommended this course to a very few ; and I know that success in one case, (and I do not know but in all) has followed the adoption of it. I am thus particular to mention these facts, because the situation of some of these patients is most pitiable, because medicine will not always cure them, and because no writer to my knowledge, has recommended marriage in these cases, where the system is much debilitated. But in the case I have mentioned, the patient could take but

little exercise, and was so weak, especially in the back, that to stand erect ten or fifteen minutes was a great task. Marriage in such cases is a course which many physicians would at first thought pronounce detrimental; but man, take him mind and body together, is a curious piece of composition, and often confounds those who sit in closets and speculate. I see no great difficulty, however, in accounting for the good effects of marriage in these cases; I say *marriage*, as it would be difficult in these civil times to enjoy all the desirable circumstances without it. We all know that certain thoughts are a most powerful stimulus to the genital system; and the object is to have all fear and restraint set aside—to have the company of a female perfectly free and constant—to have the patient become satisfied, not to say satiated, *so that the imagination may be still*, and suffer the mind to get hold of, and dwell upon some other subject. Such company, so enjoyed, is also comforting, calming, *restorative*, to the long agitated and irritable nervous system. Besides all this, in marriage there is a natural excretion of that which would otherwise excite dreams, and thus effect its own omission, and cause the miserable patient to think, “alas! I am no better—I have doctored and doctored, but it does no good—every time makes me more difficult to cure—I am gradually loosing ground—what *shall I do?* *must I die?*” which thinking, if

so it may be called, is very injurious to the system.

My experience in these cases has been with those who "had not known women." How marriage would operate with those who have *freely* enjoyed female company, I am not so sure. Much, I think, would depend on circumstances.

While I would advise—nay, urge, those who have unfortunately fell into the unsocial and niggardly practice of onanism, to abandon it at once; still I would apprise them that by so doing, they may expect to have an emission in their sleep now and then; but if they are not alarmed at it, as they need not be, it will do them no more harm than if voluntarily induced. For want of this information, Tissot's treatise is calculated to do some harm, as those who read it may quit the practice, then have involuntary emissions, and be much frightened.

SECTION 3. *Of Sterility.*—Sterility or barrenness, is not considered in itself as a disease; but as the consequence of some general or local morbid state. For this or some other reason, too little attention has been paid to it by the medical profession. A complete and able treatise on sterility and impotency would be very acceptable not merely to the many individuals personally interested, but to medical practitioners. Long attention to the subject, and better opportunities for making observations than any one, to my knowledge, has

yet enjoyed, are necessary to the production of such a treatise. In many cases of sterility even where offspring are desired, the subjects of it feel an undue delicacy in consulting a physician; which, taken in connection with their faithlessness in the powers of medicine, prevents them from doing so; while on the other hand, the infrequency of such applications, deprives physicians of good opportunities for acquiring skill in the treatment of such cases, and also contributes in no small degree to the almost total neglect of the subject by practitioners.

My present design is, to show what cases of sterility are probably curable; to mention a few means proper to be tried without applying to a physician; and to induce those subjects of these cases, who desire offspring, to make such application; if the means I shall mention prove ineffectual.

Sterility may be said to be owing to imperfect organization, or imperfect action of the organs of generation. The imperfection of organization may be congenital, that is from birth; and may consist in a very strong hymen, partially or wholly imperforate—which however does not invariably prevent conception—in narrowness of the vagina; in deficiency of ovaria; in shortness or imperviousness of the fallopian tubes, &c. In other cases the organization is rendered imperfect by some organic disease; such as large polypi in the uterus or vagina, dropsy of the ovaria &c.

Most cases of sterility from mal-organization.

either congenital or acquired are incurable. Where it is owing to narrowness of the vagina, however, "soap baths, vapour baths, the introduction of fine sponges imbibed with oily or mucilaginous substances, frictions of the perineum with oil or lard, and *coitus* immediately after menstruation," have been recommended with good prospect of success. Where the hymen forms the obstruction, a slight surgical operation is all that is required. Where the ovaria are imperfect or wholly wanting, the menses do not appear; the breasts are not developed, sexual desire is inconsiderable, or wholly absent, and the case incurable.

But in by far the greater proportion of cases of sterility; it is the *action* of the organs of generation that is in fault; or at least, there are no evident marks of organic imperfection. The predisposing causes of this imperfect action are, a phlegmatic or masculine constitution; serious diseases, as fevers, dropsy, &c., venereal excesses, *solitary* or otherwise. Obesity seems also to be a frequent predisposing cause; as "very corpulent women are often barren, for their corpulence depends either upon want of activity of the ovaria, spayed, or castrated animals generally becoming fat, or it exists as a mark of weakness of the system."—*Burns*.

In most of these cases of imperfect action, there is some irregularity of the menses; being obstructed, or sparing, or attended with much pain; or they are too profuse, or too frequent. "It is extremely rare,"

says Burns, "for a woman to conceive, who does not menstruate regularly; and, on the other hand, correct menstruation generally indicates a capability of impregnation on the part of the woman." But it has been ascertained that a male and female may be sterile in relation to each other, though neither of them be so with others.

Where the menstruation is imperfect, the first step is to correct this; for which purpose the advice of a physician will generally be necessary; for these irregularities are so various, and depend on such various causes and states of the system, that it would be inconsistent with the plan of this work to give sufficient directions for treating them, but where the general health is tolerably good, and there is no more imperfection of the menstruation than in thousands of females who are not sterile, we must suppose there is a peculiar weakness, atony, or torpor of the organs immediately concerned—unless the fault bewith the husband. I will mention some measures, easily put in practice, calculated to remove this peculiar atony, &c.

A tonic diet, consisting in a good proportion of meat; travelling; cold bathing; tincture of cantharides taken internally, and frictions with volatile linament containing some tincture of cantharides on and below the loins, or even a blister upon that part of the back that is *below* the loins. The flesh brush may be generally applied, and light shocks from the electric machine may be sent through the

pelvis. Cayenne taken freely on food or in any other way. Occasionally a brisk purge, and nightly an alœtic pill, so as to act a *little* on the bowels the next day. A moderate salivation by mercury is sometimes successful. A temporary separation from the husband, and then copulation some two or three days after the termination of a menstrual course. Let this copulation take place in free pure air, for the warm, foul air, of the bed is supposed to be unfavourable. Let the husband be abstemious (not as to diet) before this copulation, that the semen may be more active, and for some days afterwards, on the woman's account. And if conception do take place, let him still be temperate, and cautious not to frustrate the action of gestation. There is great sympathy between the breasts and the generative organs. Therefore let the breasts be frequently but gently handled, the nipples titillated, sucked, &c. The mind may be operated upon by all those endearing attentions which common sense can suggest, and what are called lascivious books and engravings may be of some use. What more powerfully stimulates the organs of generation than the imagination?

When sterility—if so it may be called—is owing to frequent abortions, conception must be for some time prevented, as suggested in the first chapter of this work, and the system strengthened.

Tincture of cantharides may be prepared by putting a drachm of Spanish flies, a little bruised,

into a gill of common spirits. It will be fit for use in six or eight days. From ten to twenty drops of it may be taken in a little water three times a day, and the dose may be increased a drop or two each day, even to one hundred drops, if it should not previously produce any unpleasant effect, and the first and only unpleasant effect will probably be strangury, that is a frequent desire to urinate, and some pain or scalding in doing so. This will soon pass away by omitting the medicine, and more readily if milk and water, flaxseed or slippery elm tea, be freely drank ; after which the medicine may be again taken, beginning with small doses. In this way it may be well to persevere for three or four months. This tincture is about a third stronger than that kept in apothecary's shops. This medicine taken as above is one of the best for leucorrhœa, or the "whites." Particularly old and bad cases.

The *volatile linament* may be prepared by putting some olive [sweet] oil into an opopanax or other open mouthed phial, then turn in about half as much *aqua ammonia*, which is liquid hartshorn, and shake them briskly together. Two or three teaspoonfuls of tincture of cantharides may be added to this linament, if the linament alone do not evidently stimulate the skin.

The *alætic pills* consist of equal parts of aloes and castile soap, and are known by this name, by all regular physicians and apothecaries.

The *African cayenne* is much stronger than the American.

SECTION 4. *Of Impotency*—This term seems not to be used in precisely the same sense by all writers. It is generally considered as an inability to perform on the part of the male. Sir A. Cooper, in speaking of it, says that it consists “in an irritability of the visiculæ seminales, and perhaps of the vasa deferentia, which is evinced by this; a man going to be connected with a woman, the moment his organs come in contact with hers, an emission takes place, and all inclination ceases.” I do not question but that in such cases there is an undue “irritability” of the genital organs, the parent of which, in elderly persons, is probably *debility*. But I consider such cases as constituting only one variety of impotency. According to my views, impotency consists in an inability of giving, or of receiving pleasure; and females as well as males may be subjects of it, yet neither the one or the other shall be sterile. That is, the semen of the impotent male may be of a fructifying quality; and the female may conceive though she have no pleasure in the act which causes her to do so.

According to this view, there are some varieties and all degrees of impotency. The male may be well able to produce pleasure, but not to enjoy it. Here the erection is good, and of long continuance; but the secreting and ejaculating organs are not “irritable,” but torpid; and the sensibility

of the nerves of the glans penis and urethra may also be diminished, or the semen may be of a vapid, unirritating quality, and so make but a weak impression on the nerves of the latter part. This is one variety. Another is that of Cooper, already mentioned. A third consists in the absence of desire and erection, then there is the case of females, who experience no pleasure, and so on.

I wish it were as easy to give directions which, if followed, would *cure* all cases of impotency, as it is to distinguish different varieties among them. For in the young and middle aged, especially in some situations of life, impotency is certainly a serious misfortune, to say the least of it. The whole evil by no means consists, in every case, in the loss of a source of pleasure. All young people ought to be apprized of the causes of it—causes which in many instances greatly lessen one's ability of giving and enjoying that pleasure which is the root of domestic happiness.

Premature and excessive indulgence, either solitary or natural, are the most frequent causes of impotency. Injuries of the head, spine, or genital organs, *may* be causes of it. In the sense I use the term, almost all diseases, and especially diseases of the stomach, are causes of temporary turns of it, in some degree. There is a close sympathy between the testicles and stomach in the male, and probably between the ovaria (certainly the uterus) and the stomach in the female;

and very slight derangements of the stomach will impair the venereal desire, &c., so long as such derangements continue. Hence emetics and cathartics often seem to stimulate the genital organs, as they often cause in them renewed action and feeling. The use of opium, tobacco, and other narcotics, seems to impair the sensibility of the nerves of the genital organs. Sedentary habits, close study, and depressing passions, as anxiety, grief, &c., impair the male power of giving, and more especially do they impair both the male and female power of receiving or enjoying pleasure. And hence in attempting a cure of impotency, all these causes are to be removed or avoided as much as possible.

Sir Astley Cooper says, "If it arise, as it frequently does in old people, from an affection of the mind, two instances of which I have known in men of property and respectability, married to as fine and handsome women as could be seen, which I attributed to a consciousness of incapability, as there was a considerable disparity in years, make light of the complaint; but, at the same time assure them of a certainty of cure, or at least of getting better; and prescribe pills composed of any inert substance, desiring them to be careful to take one only at night, and by no means have any connection with their wives; and it is seldom that more than half a dozen are swallowed before a good account is given by the patient of their surprising efficacy. Mr. Hunter recommended a patient who

was complaining of impotence to sleep with a female, but forbade him to have any connexion with her for several nights. In this case, the disease *being merely a mental affection*, he was completely relieved by pursuing the plan only a night or two, as nature was found to be ever vigorous."—*Cooper's Lectures by Snyder.*

But in most cases, real medicine will be proper. Where the erection is tolerably good, but the emission too early, we should say that opium will be beneficial; and at the same time let the mind dwell on the affection, and on women, as little as possible. Where the emission is tardy, and the sensation deficient, let the patient pursue such courses and take such medicines as prescribed for sterility; especially the tincture of flies—taken for a long time, perhaps a year, and in large doses if necessary it sometimes does wonders, in cases of seminal atony. It invigorates the whole system, and enlivens the mind; which is generally much depressed in these cases. The greater the debility of the general system, or of the generative, the greater doses will be required and borne. Drs. Francis and Hosack of New York esteemed this medicine very highly in these cases.

Females whose desires are deficient or wanting, may also pursue the course recommended for sterility; and many of them, being in a state of general debility, with pale countenances, will be much benefitted by adding to this course preparations of iron.

